DOCUMENT RESUME

ED 364 143 HE 026 940

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TITLE Fundamentals of Sponsored Project Administration. Volume I: Pre-Award Activities.
INSTITUTION National Council of Univ. Research Administrators, Washington, DC.
PUB DATE 93
NOTE 95p.
AVAILABLE FROM National Council of University Research Administrators, One Dupont Circle, Suite 220, Washington, DC 20036 ($35).
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *College Administration; Grants; *Grantsmanship; Higher Education; Program Proposals; *Research Administration; Research Coordinating Units; Research Design; Research Needs; Research Proposals
IDENTIFIERS *Sponsored Research

ABSTRACT

This volume, the first of three on sponsored research administration, focuses on pre-award activities such as research development, proposal development, budget development, review and submission of proposals, negotiation and award, and compliance issues. Research administration, or sponsored project administration, is work that supports the research activities of faculty at institutions of higher education. An introduction reviews the role of the research administrator, organization and reporting levels of research offices, types of sponsors, and types of support. The bulk of the volume explores in detail nine key pre-award activities: (1) creation of a sponsored project administration library; (2) faculty interest profiles; (3) assistance with identification and conceptualization of projects and identification of potential sources of support; (4) help with preparation of the proposal or pre-proposal; (5) help with preparation of the budget; (6) review and submission of proposals; (7) completion of representations and certifications; (8) compliance issues; and (9) negotiation and award. Several sections contain sample forms, checklists, and worksheets. Includes an index. (JB)

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ED 364 143

National Council of University Research Administrators

Fundamentals of Sponsored Project Administration

Volume I: Pre-Award Activities

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FUNDAMENTALS OF SPONSORED PROJECT ADMINISTRATION

Volume I:

Pre-Award Activities

Julie T. Norris
University of Houston

for the

NATIONAL COUNCIL OF UNIVERSITY RESEARCH ADMINISTRATORS

Washington, D.C. 20036

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PREFACE

Research administration (or more broadly, sponsored project administration) is a relatively new activity in colleges and universities, receiving its start in the 1950s as the federal government's funding of research at these institutions increased dramatically after World War II. Sponsored project administration refers to those activities of an institution of higher education that are financed by external funds and that support the basic functions of an institution -- teaching, research, creative work or activity, and public service.

This ever-changing and increasingly complex field demands a fundamental understanding of the processes and practices established by sponsoring agencies (federal, state, private), requires knowledge of the academic institution itself and of the policies which govern that institution, an unwavering commitment to quality, attention to detail, and -- most importantly -- an attitude of support and encouragement to faculty who are doing the research which sponsored programs offices support. Regardless of the size of the institution or its volume of external support for sponsored programs, external support of research activities is generally recognized as being of critical importance in the role and scope of institutions of higher education.

These volumes will concentrate on issues, functions, and procedures of value both to the newcomer in the field of research administration and to the individual who wishes a refresher on the basics of sponsored project administration, rather than on the general areas of policy development related to research. References will be made to specific regulations of sponsoring agencies as illustrative of a general principle, and the reader will be directed to other publications which are useful in specific circumstances. The current volume focuses on pre-award activities (research development, proposal development, budget development, review and submission of proposals, negotiation and award, and compliance issues); the second volume will focus on post-award activities (creating accounts, non-fiscal management, fiscal management, subrecipient monitoring, intellectual property, and post-award compliance issues); the final volume will focus on financial billing and reporting, closeout, audits, and post-closing items.

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INTRODUCTION

The Role of the Research Administrator

That institutions of higher education have three components of their mission--teaching, research, and public service--is axiomatic. Unlike universities in the Middle Ages, these institutions are not only conservators of current knowledge but creators and transmitters of new knowledge.

Funds are given to institutions by a variety of external organizations to support institutional activities, to aid in the development and transmission of knowledge to society, to train individuals to work with complex technologies, and to provide support to institutions in acquiring the infrastructure necessary to conduct research. In this environment the research administrator concept was developed -- a clear need was shown for an individual with expertise in areas such as research development, proposal development, budget preparation, and with skills in negotiating and administering funds from external agencies.

Recent impacts on institutions in the area of indirect costs, the pressures for budget cutting at both public and private institutions, and the amount and type of external support at an institution are elements that must be carefully considered in determining the significance of the role of the research administrator within the institution.

For example, is the research administrator an individual charged with the responsibility of developing as well as implementing policies related to research? Is the research administrator the individual within the institution responsible for notifying senior management of changes which affect research? Is that the individual who prepares institutional responses to proposed new federal rulemaking related to research? Answers to these types of questions may be useful in considering where in an organization a research office is placed and the role of the senior officer in that office. At the operating level, however, the placement of the research office is not as important as the communication channels developed between that office and the rest of the institution. Research administration is so broadly based that it cannot flourish independent of other functions of the institution. Although many illustrative examples come to mind, one will suffice: Is there an institutional policy on payment to graduate students and does that policy cover research assistants as well as teaching assistants?

Organization and Reporting Levels of Research Offices

The organization of research offices and their location within the institution (whether they report to the chief academic officer, chief financial officer, or a vice president for research) have been topics of interest over the years. When first established, most research offices were in the financial side of the institution and were responsible for billing and receiving funds on research awards, managing equipment, seeking changes in

the project, handling indirect cost issues, and related functions. Over the years other responsibilities -- such as compliance with animal and human subject regulations, assisting in the technical development of proposals, seeking funding sources for research projects, reviewing and processing proposals, and intellectual property issues -- have become of significant importance.

Institutions responded to these increasing functions in a variety of ways: some institutions placed those additional responsibilities in the financial side of the institution; some created a second office (normally called a research development office) in the academic side of the institution; and some created an entirely new organization (such as a research foundation) to handle both fiscal and non-fiscal functions.

There is currently an emerging trend -- that of the consolidated office approach, which is utilized at an increasing number of institutions. In this approach, most (if not all) of the sponsored projects functions which previously existed in parallel organizations under the academic and financial officers are combined in a single office (much like the organization in many research foundations). In this environment, one office (which may organizationally report to the academic vice president, the financial vice president, or a vice president for research) is responsible for supporting all the needs of the research community.

However, *where* a research office is housed organizationally is not as important as *what* the research office provides as services to the faculty it serves. By appropriate communication the individuals who need to be involved in any specific research administration function can be involved, institutional organization notwithstanding. This is especially true when considering what activities at the pre-award stage are properly the responsibility of the sponsored project office and which are the responsibility of the development office.

Although some projects (awards from the National Science Foundation or the National Institutes of Health, for example) are clearly sponsored projects and some (donations of funds for new buildings and faculty endowments, for example) are clearly gifts, there is a substantial range of projects which can be classified as either sponsored projects or gifts, or sometimes as both. Most institutions have developed institutional policies which define and set primary responsibility; the reasons for where the line is drawn between the two is normally dictated by specific institutional priorities.

In serving faculty and other persons who initiate and perform on research projects, it is important that the research administrator remember that awards are made to the institution, not to the individual faculty member who serves as the principal investigator on the project, and that proposals are submitted by the institution, not by the creator of the proposal. This distinction can be important when disagreements arise during the development and submission of the proposal or during the management of the project. Although the principal investigator (or project director) is critical to carrying out the project, the institution bears ultimate responsibility for that activity and, if the rules and regulations are not followed in submission of a proposal or management of an award, the institution--not the faculty member--is legally responsible.

Prior to a discussion specifically related to pre-award activities, two other general information items should be discussed: types of sponsors of sponsored projects and types of awards made by those sponsors.

Types of Sponsors

Statistics show that higher education institutions rely upon the federal government as the funding source for the majority of sponsored projects undertaken by those institutions. At public institutions, a significant amount can also come from state agencies, and both public and private institutions are receiving funding from county and local governmental agencies when they have a particular expertise needed by those local agencies. Additionally, funding from foundations and from the private sector can often be important to an institution's research programs. These sources of funds generally do not have the procedural, compliance, and regulatorily constricting regulations of federal or state governments, but these funding sources can pose unique challenges to institutions, particularly when coordination with an institutional development office is necessary at the proposal stage.

Types of Support

Types of support are equally important to recognize. At the federal level, the Federal Grant and Cooperative Agreement Act of 1977 identified two general categories of federal support: *assistance* and *procurement*. The legal distinction between assistance and procurement is important because of the types of regulations that accompany each.

A distinction often made between assistance (i.e., grants and cooperative agreements) and procurements (i.e., contracts) is that a grant is awarded for what the institution wants to do and a contract is awarded for what the sponsor wants the institution to do.

Assistance is defined as the instrument of choice when the principal purpose of the award is the transfer of money, property, services, or anything of value to accomplish a public purpose of support or stimulation authorized by statute. The difference between a grant and a cooperative agreement is generally that in the latter there is "substantial involvement" by the sponsor in the research activity described in the award itself.

A contract results when the primary purpose of the award is the acquisition by purchase, lease, or barter of property or services for the direct benefit or use of the federal government.

Types of Pre-award Activities

This section will discuss a number of various types of pre-award activities, but it is axiomatic that the single most important part of the pre-award functions at any institution is meeting and learning about the faculty. The more the research administrator knows -- even as a lay person -- about the research activities of the faculty at the institution, the more effective can be the pre-award services provided to those faculty.

Pre-award activities related to research administration can include such widely divergent activities as funding searches and management of intellectual property and responsibility for institutional review boards relating to humans used as subjects in research. Generally, however, all organizational structures defined as pre-award include such functions as

Creation of a sponsored project administration library
Faculty interest profiles
Assistance with identification and conceptualization of projects and identification of potential sources of support
Help with preparation of the proposal or preproposal
Help with preparation of the budget
Review and submission of proposals
Completion of representations and certifications
Compliance issues
Negotiation and award

Each of these functional areas is described in detail in sections that follow.

CREATION OF A SPONSORED PROJECT ADMINISTRATION LIBRARY

Providing a library of resources for individuals interested in finding support for sponsored projects is an essential ingredient in the success of any research development function. At smaller institutions, the library may consist of shelves in a research office conference room and be maintained by the director of the office with student support. At some institutions, the research office and the development office share resources. At many large institutions, a research development library is housed in the research administration office and is staffed by one or more full-time individuals familiar with sources for external support. For these individuals to have some technical competence in a field may be useful but is not essential. For one person to be technically competent in all fields is not possible, so someone who has a broad based knowledge at the sophisticated lay level may be of even more support to an investigator looking for funding than an individual with in-depth competence in just one (or a few) areas. What is important is that the research development specialist has a system for identifying the material which should be in the library and a way to update that information so that it is as current as possible.

In considering what should be available in a research library, research officers must consider the nature of their institution. At a medical school, certain publications would be of more importance than they would be at a primarily undergraduate institution; a developing institution without a Ph.D. program would have an interest in some publications which are not of interest to a comprehensive urban university with several Ph.D. programs. Nonetheless, there are some publications which are critical for every institution to have available:

CATALOG OF FEDERAL DOMESTIC ASSISTANCE

This is a government-wide compendium of federal programs, projects, services, and activities which provide assistance or benefits to a state or states, territorial possessions, county, city, other political groupings or instrumentalities thereof; any domestic profit or nonprofit corporation, institution, or individual. The Catalog is a useful tool in determining the origins of certain programs, details all grant and cooperative agreement programs of the federal government, and gives deadlines and contacts for further information.

FEDERAL REGISTER

This document (published daily) provides a standard format for making available the regulations and legal notices issued by federal agencies. Rules and regulations which govern the administration of research are published in the Register for comment, and many agencies (such as the Department of Education) announce their grant programs in this document. The document is available in hard copy and via electronic mail.

COMMERCE BUSINESS DAILY (CBD)

CBD lists government procurement invitations and, although it is comprised mainly of non-research activities, requests for proposals (RFPs) for research, development, and testing are included as well as the opportunity for expert and consultant services.

NATIONAL SCIENCE FOUNDATION - GUIDE TO PROGRAMS

This document, issued annually, describes all the programs for which the National Science Foundation (NSF) will provide support each federal fiscal year. In addition, it includes an NSF organization chart and has a section on the criteria used for the selection of research projects by the Foundation.

NIH GUIDE FOR GRANTS AND CONTRACTS

The National Institutes of Health (NIH) bimonthly publication announces scientific initiatives of the NIH and provides policy and administrative information on the NIH. This document is available in hard copy or via electronic mail.

HUMANITIES

Published bimonthly by the National Endowment for the Humanities, each issue contains articles on humanities scholarship, a listing of recent awards, and application deadlines for NEH programs, together with the names and phone numbers of all program officers.

THE FOUNDATION DIRECTORY

The directory includes brief synopses of most private foundations, listed alphabetically by state.

TAFT CORPORATE DIRECTORY

This publication contains information on more than 500 private giving programs, including funding levels, priorities, and typical grantees.

A modest investment (less than $1000) will permit acquisition of the basic library in hard copy. Federal agencies, and many state and private foundations, maintain mailing lists and will forward information about programs to individuals on those mailing lists. In addition, developing a list of agencies and foundations to write on an annual basis asking for updated guidelines, lists of programs, etc. is strongly recommended and is a simple item to implement in this era of word processing equipment.

Attached is a more complete listing of a basic set of materials for a research development library which has been developed by NCURA. Also attached is a listing from a mid-sized public institution showing the basic publications it maintains in its library.

A relatively new phenomenon has been the development of databases, particularly at the federal level, which are accessible via computer and which provide the same information--often in a more easily accessible format--as the hard copy documents. Of particular note are FEDIX and MOLIS, which are on-line database services providing access to federal programs from a number of federal agencies, currently including the Agency for International Development, Air Force Office for Scientific Research, Department of Commerce, Department of Education, Department of Energy, Federal Aviation Administration, Department of Housing and Urban Development, National Aeronautics and Space Administration, National Science Foundation, National Security Agency, and the Office of Naval Research. FEDIX (federal information exchange) provides information on grant programs sponsored by these agencies; MOLIS (minority on-line information system) provides specialized information about programs for minorities and women. Access to these databases is at no-cost to the institution, although charges for modems and computer lines are the responsibility of the institution. This growing area will be of increasing importance in the future. Computerized access to information databases and, in the future, computerized transmission of proposals to agencies may become a cornerstone of research offices in the next century.

No research office (pre-award or post-award) can operate without access to all the Office of Management and Budget Circulars important to the federal research processes. Through the issuance of circulars the Office of Management and Budget (OMB) prescribes the rules and regulations that federal agencies must utilize in their relationships with their constituents. Although most of these circulars are not specifically appropriate to the sponsored program arena, there are some of critical importance to institutions of higher education. The circulars are available from the Government Printing Office with changes in those circulars appearing in the *Federal Register*. The complete list of currently effective circulars is attached and is reprinted from the NCURA publication *Regulation and Compliance: A Compendium of Regulations and Certifications Applicable to Sponsored Programs*. The most important for the research enterprise are discussed briefly below:

OMB CIRCULAR A-21 (COST PRINCIPLES FOR EDUCATIONAL INSTITUTIONS)

This circular establishes the principles for determining costs applicable to grants, cooperative agreements, contracts, and other agreements with educational institutions. The document sets forth the appropriate mechanisms for developing indirect cost rates at large and small institutions (the difference being identified by the annual dollar volume of federal expenditures) and identifies selected items of cost as allowable or unallowable for reimbursement from the federal government.

OMB CIRCULAR A-110 (GRANTS AND AGREEMENTS WITH INSTITUTIONS OF HIGHER EDUCATION, HOSPITALS, AND OTHER NONPROFIT ORGANIZATIONS: UNIFORM ADMINISTRATIVE REQUIREMENTS)

This document was issued to provide uniform administrative regulations for the management of sponsored projects by federal agencies supporting the research enterprise. The circular applies *only* to grants and cooperative agreements and does *not* apply to contracts. Standard forms for applying for federal assistance are identified in the circular,

although agencies are permitted to use their own forms when requesting proposals from institutions of higher education.

OMB CIRCULAR A-128 (AUDITS OF STATE AND LOCAL GOVERNMENTS) and OMB CIRCULAR A-133 (AUDITS OF INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS)

These circulars prescribe the audit requirements for institutions which accept federal funds. OMB Circular A-133 is the circular which applies to institutions of higher education, but permission is granted to states, if they so desire, to include their state institutions of higher education in the state-wide single audit processes mandated by OMB Circular A-128 if they so desire. To date, approximately 20 states have included their state institutions in the single audit processes. Of importance to this discussion is the fact that the audits mandated in either of these circulars include both program and compliance audits as well as audits of financial transactions and systems.

FUNDING INFORMATION & AWARD MANAGEMENT

A Selected List of Publications

ALL AGENCIES

All sponsors, federal, state and private, provide printed information regarding programs and deadlines. Federal agencies, as well as the majority of state and private agencies, provide detailed application materials. Available at no cost, information and application forms should be requested directly from the sponsoring agency.

FEDERAL GOVERNMENT PUBLICATIONS

Federal agencies will often send one copy of a publication with additional copies available for a fee. When a fee is charged for Federal government publications, those publications can be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402, telephone (202)783-3238. Payment in advance or a deposit account is required.

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA)
Published annually, plus one six-month update (usually June/December)
(1991: $38.00). Available from the Superintendent of Documents.

The Catalog is a Government-wide compendium of Federal programs, projects, services and activities which provide assistance or benefits to a State or States, territorial possession, county, city, other political grouping or instrumentality thereof, any domestic profit or nonprofit corporation, institution, or individual, other than an agency of the Federal Government.

The Catalog is a useful tool in determining the origin of certain programs as well as in meeting the OMB Circular A-128 and A-133 requirements of categorizing all Federal support using the CFDA number.

FEDERAL REGISTER
Published daily, Monday through Friday, by the Office of the Federal Register, National Archives and Records Service. This publication is available from the Superintendent of Documents. (1992: $340.00)

The *Federal Register* provides a uniform system for making available to the public regulations and legal notices issued by Federal agencies. These include Presidential Proclamations and Executive Orders as well as Federal agency documents having general applicability and legal effect, documents required to be published by Act of Congress and other Federal agency documents of public interest. There are no restrictions of the reproduction of material appearing in the *Federal Register*.

COMMERCE BUSINESS DAILY
Published daily, Monday through Friday, by the U.S. Department of Commerce. This publication is available from the Superintendent of Documents. (1992: $208.00)

The *Commerce Business Daily* lists government procurement invitations, contract awards and sales of surplus property in excess of $25,000. While it is generally focused on non-research procurement activity, listings of experimental, developmental, test and research proposal requests are made as well as opportunities for expert and consultant services.

NATIONAL SCIENCE FOUNDATION - GRANTS FOR RESEARCH AND EDUCATION IN SCIENCE AND ENGINEERING - An Application Guide
NSF 92-89, October 1992 (Replaces 90-77)

This document is the guide giving instructions for the preparation of proposals to the National Science Foundation and contains the forms needed for the submission of proposals, for PI transfers, for annual progress reports, and final project report forms.

NATIONAL SCIENCE FOUNDATION - GUIDE TO PROGRAMS
Published annually by the Public Information Branch of NSF. This publication is available from both the NSF and the Superintendent of Documents. (available at no charge)

In addition to describing all programs for which the NSF will provide support, the publication contains a section on criteria for the selection of research projects and an NSF organization chart.

NATIONAL SCIENCE FOUNDATION - BULLETIN
Published monthly (except July and August) This publication is available from the NSF at no charge.

Contains current information on NSF programs, policies and activities.

NATIONAL SCIENCE FOUNDATION - GRANT POLICY MANUAL
NSF 88-47, Rev. 7/89 and updated occasionally. This publication is available from the Superintendent of Documents.

This manual is designed to discuss basic NSF grant administration policies and procedures which are generally applicable to most types of grants to most categories of recipients.

PUBLIC HEALTH SERVICE - GRANTS POLICY STATEMENT
Revised October 1, 1990, DHHS Publication No. (OASH) 90-50,000. This publication is available from the Superintendent of Documents.

This booklet provides a common understanding of the framework for the administration of discretionary grants within which PHS staff and responsible recipients/officials must operate. The contents of this booklet do not apply to block grant

awards to states where there is reliance on state laws, policies and procedures for administration of those programs.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES - GRANTS ADMINISTRATION MANUAL
This publication is available from the Superintendent of Documents.

This manual is designed to provide guidance on the various aspects of grant management to all granting agencies of the department. The department-wide policies are to be implemented by each of the granting agencies in accordance with the requirements of their particular grant programs and the characteristics of their respective organizations.

NIH GUIDE FOR GRANTS AND CONTRACTS
Published weekly. Single subscriptions are available at no charge.

Grants and Contract Guide Distribution Center
National Institutes of Health
Building 31, Room B3B5O7
Bethesda, MD 20892

This publication announces scientific initiatives and provides policy and administrative information to individuals and organizations who need to be kept informed of opportunities, requirements and changes in grants and contracts activities administered by the National Institutes of Health. Recipients are sent policy amendments as issued.

This document is also obtainable through electronic mail (one electronic copy per institution).

NIH PUBLIC ADVISORY COMMITTEES
Information published semi-annually in April and October.

Committee Management Office
National Institutes of Health
Building 1, Room B1-56
Bethesda, MD 20892

In carrying out their research missions, the NIH relies upon public advisory committees for counsel and critique with respect to both ongoing and proposed activities. This publication presents the authority, structure, functions, frequency of meetings and membership of the NIH public advisory committees. This publication is particularly useful in determining the composition of a particular review committee for proposals.

USER'S GUIDE TO THE DOE FACILITIES (DOE/ER-0174)
January 1984.

U.S. Department of Energy
Director, Office of Energy Research
Office of Field Operations Management
Washington, DC 20585

This document is an important source of information for those interested in cooperative relationships among the national laboratories, the academic community and private industry. The Guide consists of three parts: 1) an introduction which answers some basic questions about DOE User Facilities and other user resources; 2) data sheets which provide information on each User Facility such as location, user contact, description of research, user arrangements, and cost; and 3) a subject index on areas of research and equipment available at User Facilities.

HUMANITIES
Bimonthly review published by the National Endowment for the Humanities. This publication is available from the Superintendent of Documents. (1992: $11.00)

Each issue contains articles on humanities scholarship, a list of recent grant awards, and the nearest grant application deadlines for all NEH programs together with the names and telephone numbers for all program officers.

FEDERAL ACQUISITION REGULATION (FAR) AND SUPPLEMENTS
Updated periodically. Available from the Superintendent of Documents.

The Federal Acquisition Regulation, with its agency-specific supplements, provides the legal and administrative framework for the management of federal procurement awards (contracts). Agency specific supplements include approved additions to the regulations and deviations from the FAR itself.

U.S. GOVERNMENT MANUAL
Available from the Superintendent of Documents.

The Manual is the official handbook of the Federal government and is revised annually. It provides comprehensive information on the agencies of the legislative, judicial, and executive branches. It also includes information on quasi-Federal agencies and international organizations in which the U. S. participates.

GENERAL INFORMATION PERIODICALS

ISSUES IN SCIENCE AND TECHNOLOGY
Published quarterly. Institution annual subscription rate is $36.00

National Academy of Sciences
2101 Constitution Avenue, NW
Washington, DC 20418

Contains articles that embrace the entire range of national and international issues that involve science, technology and health. Useful publication for those involved in public policy issues.

BUSINESS OFFICER
Published monthly by NACUBO. Subscription is part of institution's annual membership dues.

NACUBO
One DuPont Circle, Suite 510
Washington, DC 20036

Contains articles geared toward financial officers of the institution, but issues have ramifications for persons involved with sponsored program management.

FEDERAL CONTRACTS REPORT
Published weekly. (1991: $796)

The Bureau of National Affairs, Inc.
1231 25th Street, NW
Washington, DC 20037
(800) 372-1033

The report provides timely information regarding federal contracts and grants administration and policy pertaining to contracting and grants-in-aid programs and problems. The newsletter also advises of events significantly affecting the interpretation of federal procurement and grants policy, program management, research and development.

SCIENCE
Published weekly on Friday, except the last week in December. Subscription is part of membership in AAAS. (1992: $82.00)

American Association for the Advancement of Science
1333 H Street, NW
Washington, DC 20005

Serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached.

THE CHRONICLE OF HIGHER EDUCATION
Published weekly except the last two weeks in August and December. (1992: $67.50)

The Chronicle of Higher Education
1225 Twenty-third Street, NW
Washington, DC 20037

This newspaper contains articles regarding all issues and happenings in higher education including research-related articles covering both national, state and local institutional issues and events. Some announcements of grant and fellowship opportunities are published in the Chronicle.

THE SCIENTIST
Published every other week. (1992: $63.00)

The Scientist
5615 W. Cermak Road
Cicero, IL 60650

News, opinion, research and professional stories for the science professional. This publication provides good information on broad research topics.

SCIENCE AND GOVERNMENT REPORT
Published twice monthly, except in January, July, August and September. (1992: $395.00)

Science and Government Report
Box 6226A, Northwest Station
Washington, DC 20015

This publication provides good background materials on the "politics" and policies of funding agencies.

GENERAL DIRECTORIES OF FUNDING SUPPORT

ANNUAL REGISTER OF GRANT SUPPORT
(1992: $176.55)

National Register Publishing Company
MacMillan Directory Division
3004 Glenview Road
Wilmette, IL 60091

Includes details of the grant support programs of government agencies, public and private foundations, corporations, community trusts, unions, educational and professional associations and special interest organizations. Covers a broad spectrum of interests from academic and scientific research, project development, travel and exchange programs, and publication support to equipment and construction grants, in-service training and competitive awards and prizes in a variety of fields.

ARIS FUNDING REPORTS
($455 annually)

ARIS (Academic Research Information System)
The Redstone Building
2940 16th Street
San Francisco, CA 94103
(415) 558-8133

These reports with occasional supplements are issued every five to seven weeks and provide information about government and non-government funding sources. Each listing includes the address and telephone number for the sponsoring organization, description of the program, and application deadlines.

FEDERAL RESEARCH REPORT
Published weekly. Annual subscription rate is $164.50.

Business Publishers, Inc.
951 Pershing Drive
Silver Spring, MD 20810-4464

Contains information on research opportunities available from federal agencies and some private organizations. Features a section listing recent awards and a column on federal contract tips.

FEDERAL GRANTS AND CONTRACTS WEEKLY
Published weekly. Annual subscription rate is $329.00.

Capitol Publications
1101 King Street
PO Box 1454
Alexandria, VA 22313-2054

Project opportunities in research, training and service. Has section on news, grants alert, RFPs available, RFPs calendar.

THE FOUNDATION CENTER PUBLICATIONS
The Foundation Center
79 Fifth Avenue
New York, NY 10003-3050
(800) 424-9836

THE FOUNDATION DIRECTORY
Published every two years with supplements in intervening years. (1992: $153.00)
A major source book containing brief write-ups of most private foundations (large and small) listed alphabetically by state. Includes entries for over 4,000 foundations accounting for approximately $3.5 billion in annual giving.

FOUNDATION GRANTS INDEX
Annual publication plus bimonthly magazine ($95.00)
Foundation giving preference can be identified by studying the subject index in the annual edition which lists 40,546 grants of $5,000 or more awarded by 459 foundations. The bimonthly magazine provides information on recent foundation grants; changes in addresses, guidelines and policies of foundations; and lists of new publications, including annual reports.

FOUNDATION GRANTS TO INDIVIDUALS
($40.00)
Over 1,000 independent corporate foundations that award grants to individuals are identified in this publication. Included are grants for educational support, general welfare and medical assistance, awards and prizes, foreign individuals, company employees, and arts and cultural support.

CORPORATE FOUNDATION PROFILES
Published annually. (1991: $125.00)
This directory provides in-depth information on over 250 corporate foundations in the U.S. with assets of over $1 million or annual giving of $100,000 or more.

TAFT GROUP PUBLICATIONS
The Taft Group
5130 MacArthur Boulevard, NW
Washington, DC 20016
(301) 816-0811

TAFT CORPORATE DIRECTORY
Published annually, plus 12 issues each of the monthly Corporate Giving Watch and Corporate Giving Profiles. (1991: $377; Directory only, $297.00; Newsletters only, $127.00 annually). Contains information on more than 500 corporate giving programs, including contacts, giving priorities, typical recipients/grants, areas of operation/distribution, etc. Newsletter focuses on new programs and provide detailed profiles of selected corporations.

TAFT FOUNDATION REPORTER
Published annually, plus 12 issues each of the monthly Foundation Watch and Foundation Updates. (1991: $377; Directory only, $297.00; Newsletters only, $127.00 annually)
Contains profiles of 500 prominent private foundations, including background information, application procedures, grant distribution and sample grants.

GOVERNMENT CONTRACTS REPORT
Updated weekly. (1993: $1,550.00)

Commerce Clearing House, Inc.
PO Box 5490
Chicago, IL 60680-9808

Contains FAR, FAR supplements and other regulations as well as provides useful update of current regulatory practices, policies and decisions in the field of contracting.

DIRECTORY OF RESEARCH GRANTS
Published annually. ($118.00)

Oryx Press
4041 North Central, Suite 700
Phoenix, AZ 85123-3397
(800) 279-6799

This directory contains 6,147 grant programs arranged alphabetically by grant title. Each program includes a description, deadline date, CFDA number, restrictions or requirements, address, telephone number, and funding amount. The book is indexed by subject, sponsoring organization, and type of organization.

SPECIALIZED DIRECTORIES AND NEWSLETTERS OF FUNDING SUPPORT

AID BUSINESS OUTLOOK
Biweekly (1991: $397.00)

International Publications
1321 Duke Street, Suite 200
Alexandria, VA 22314
(703) 548-5497

This publication lists all of the procurement notices, contract awards, and information about proposed or ongoing U.S. Agency for International Development (AID) projects.

AIDS: A STATUS REPORT ON FOUNDATION FUNDING
Book ($60.00).

Available from the Foundation Center (see above address).

This report reveals current levels and the nature of funding for AIDS research among America's private foundations.

AMERICAN PSYCHOLOGICAL ASSOCIATION'S GUIDE TO RESEARCH SUPPORT
Book ($30.00 non-members; $22.00 members).

American Psychological Association, Inc.
P. 0. Box 2710
Hyattsville, MD 20784
(202) 955-7600

This guide identifies federal and private sources for funding research in the behavioral sciences. The directory lists type of research, funds available, awards made, average amount, and application procedures.

ARTS & CULTURE
Monthly (1991: $138.00)

Education Funding Research Council
1611 N. Central Street, Suite 508
Arlington, VA 22209
(703) 528-1000

This monthly newsletter highlights funding sources, particularly from NEH, NEA, and private sources for arts and cultural activities.

BUSINESS AND MANAGEMENT EDUCATION FUNDING ALERT
Published monthly by the American Assembly of Collegiate Schools of Business. (1991: $400.00)

Carolyn Looff & Associates
P. 0. Box 22258
Lexington, KY 40522-2258
(606) 266-8274

The Alert targets opportunities for business school, research, education and training projects.

COMPUTER RESOURCE GUIDE
Book ($95.00).

Public Management Institute
358 Brennan Street
San Francisco, CA 94107
(415) 896-1900

This is a complete guide to computer-related giving by all major funding sources. Indexes are provided for funder's computer interests, eligible activities, contact person, geographic area, and other grant recipients.

DIRECTORY OF BUILDING AND EQUIPMENT GRANTS
Book ($34.50).

Research Grant Guides
P. 0. Box 4970
Margate, FL 33063

This directory lists private and corporate sources for funding for computers, software, and training projects as well as sources for other high technology equipment grants with some information on proposal preparation.

GRANTS IN THE HUMANITIES
Booklet ($29.95).

Neal-Schuman Publishers, Inc.
23 Cornelia Place
New York, NY 10014
(212) 925-8650

This booklet gives a brief review of funding for the humanities, including a bibliography of funding guides, a chapter on proposal writing, and a descriptive listing of important granting agencies.

GUIDE TO FEDERAL FUNDING FOR SOCIAL SCIENTISTS
Book ($30.00 members, $50.00 non-members).

APSA Publishing
1527 New Hampshire Avenue, NW
Washington, DC 20036
(202) 483-2512

This guide introduces new scholars to the variety of federal agencies that provide funding for research and research training and informs established scholars of alternative funding opportunities in federal agencies.

HEALTH GRANTS AND CONTRACTS WEEKLY
Weekly ($292.00).

Capitol Publications, Inc.
1300 North 17th Street
Arlington, VA 22209
(703) 683-4100

An excellent source for advance notice of upcoming NIH health research announcements. Also contains articles on other policy issues. Each weekly issue contains a profile of a federal agency or private foundation.

ORYX PRESS GRANTS DIRECTORIES

ORYX Press
4041 North Central, Suite 700
Phoenix, AZ 85123-3397
(800) 279-6799

DIRECTORY OF GRANTS IN THE HUMANITIES
Book ($74.50)
This directory has 1,925 programs that support research and performance in literature, language, linguistics, history, anthropology, philosophy, ethics, religion and the fine and performing arts.

DIRECTORY OF GRANTS IN THE PHYSICAL SCIENCES
Book ($42.50).
Included in this directory are 1,561 programs that provide funds for laboratory research, undergraduate education, scholarships and fellowships for graduate and postgraduate students, internships, and conferences in fields ranging from acoustics to zoology.

GRANTS Database on CD-ROM

Available from: Dialog Information Services, Inc.
3460 Hillview Ave.
Palo Alto, CA 94304
Phone: (415) 858-2700
FAX: (415) 858-7069

Cost: $850.00 Annually, updated bimonthly

Approximately 10,000 funding sources listed in a menu-driven database. A search can be made by keywords, agency, title, etc. The information selected may be downloaded to disk or printed. An excellent, time-saving resource for faculty or research development administrators.

FUNDING SOURCE PUBLICATIONS

Office of Sponsored Programs

Publication	Publisher
Aris Funding Messenger	Academic Research Information System
Annual Register of Grant Support	Marquis Publishing, Inc.
Business and Economics Funding Guide	American Association of State Colleges and Universities
Catalog of Federal Domestic Assistance	U. S. Government Printing Office
Chronicle of Higher Education	Chronicle of Higher Education, Inc.
Commerce Business Weekly	United Communications Group
Corporate Giving Watch	The Taft Group
Directory of Biomedical and Health Care Grants	Oryx Press
Directory of Building and Equipment Grants	Research Grant Guides
Directory of Computer and High Technology Grants	Research Grant Guides
Directory of Grants in the Humanities	Oryx Press
Directory of Research Grants	Oryx Press
Directory of Texas Foundations	Funding Information Center
Education Grants Alert	Capitol Publications, Inc.
Federal Grants and Contracts Weekly	Capitol Publications, Inc.
Federal Register	U.S. Gov't Printing Office
Federal Yellow Book	Monitor Publishing Co.
Foundation and Corporate Grants Alert	Capitol Publications, Inc.

Foundation Directory	The Foundation Center
Foundation Giving Watch	The Taft Group
Grant Advisor	The Taft Group
Grant Guide for Minorities	The Foundation Center
Grants for Women and Girls	The Foundation Center
Higher Education Opportunities for Minorities and Women	U. S. Department of Education
Humanities	U. S. Government Printing Office
Issues in Science and Technology	National Academy of Sciences
NIH Guide to Grants and Contracts	National Institutes of Health
NSF Bulletin	National Science Foundation
Science	American Association for the Advancement of Science
Science and Government Report	Science and Government Report, Inc.
The Scientist	Science, Inc.
Social and Political Science Programs	The Foundation Center

PROPOSAL DEVELOPMENT PUBLICATIONS

From Idea to Funded Project: Grant Proposals that Work	Oryx Press
The Proposal Writer's Swipe File: 15 winning fund-raising proposals	The Taft Group
Writing a Successful Grant Application	Jones and Bartlett

OFFICE OF MANAGEMENT AND BUDGET CIRCULARS

Circular No.		Circular Subject	Date
A-1	(revised)	Office of Management and Budget's system of Circulars and Bulletins to executive departments and establishments	08/07/52
A-3	(revised)	Government publications	05/02/85
A-11	(revised)	Preparation and submission of budget estimates (Transmittal Memorandum No. 59)	06/17/88
A-16	(revised)	Coordination of surveying and mapping activities	05/06/67
A-18	(revised)	Policies on construction of family housing (Transmittal Memorandum No. 1)	10/18/57 08/23/67
A-19	(revised)	Legislative coordination and clearance (Transmittal Memorandum No. 1)	09/20/79 09/20/79
A-20	(revised)	System of control over the use of foreign currencies	05/21/66
A-21	(revised)	Cost principles for educational institutions (Transmittal Memorandum No. 1) (Transmittal Memorandum No. 2) (Transmittal Memorandum No. 3) (Transmittal Memorandum No. 4) (Transmittal Memorandum No. 5)	02/26/79 07/23/82 06/04/86 12/02/86 10/03/91 07/26/93
A-25		User Charges (Transmittal Memorandum No. 1) (Transmittal Memorandum No. 2)	09/23/59 10/22/63 04/16/74
A-34	(revised)	Instructions on budget execution (Transmittal Memorandum No. 1)	(no date) 08/26/85
A-45	(revised)	Policy governing charges for rental quarters and related facilities	03/28/84
A-50	(revised)	Audit follow-up	09/29/82
A-62	(revised)	Policies and procedures for the coordination of federal meteorological services	11/13/63
A-67		Coordination of federal activities in the acquisition of certain water data	08/28/64

Circular No.		Circular Subject	Date
A-70	(revised)	Federal credit policy	08/24/84
A-73	(revised)	Audit of federal operations and programs	06/20/83
A-76	(revised)	Performance of commercial activities	08/04/83
		(Transmittal Memorandum No. 1)	08/12/85
		(Transmittal Memorandum No. 2)	04/10/86
		(Transmittal Memorandum No. 3)	07/31/86
		(Transmittal Memorandum No. 4)	10/29/86
		(Transmittal Memorandum No. 5)	01/28/87
		(Transmittal Memorandum No. 6)	03/04/88
A-87	(revised)	Cost principles for state and local governments	01/28/81
A-88	(revised)	Indirect cost rates, audit, and audit follow up at educational institutions	11/27/79
A-89	(revised)	Catalog of Federal Domestic Assistance	08/17/84
A-94	(revised)	Discount rates to be used in evaluating time-distributed costs and benefits	03/27/72
A-97	(revised)	Rules and regulations permitting federal agencies to provide specialized or technical services to state and local units of government under Title III of the Inter-governmental Cooperation Act of 1986	08/29/69
		(Transmittal Memorandum No. 1)	03/27/81
A-99		Direction and control of litigation	06/30/70
A-102	(revised)	Grants and cooperative agreements with state and local governments	03/03/88
A-104	(revised)	Comparative cost analysis for decisions to lease or purchase general purpose real property	06/01/86
A-105		Standard federal regions	04/04/74
A-106		Reporting requirements in connection with the prevention, control, and abatement of environmental pollution at existing Federal facilities	12/31/74
A-109		Major systems acquisitions	04/05/76

Circular No.		Circular Subject	Date
A-110	(revised)	Uniform administration requirements for grants and other agreements with institutions of higher education, hospitals, and other non-profit organizations (Transmittal Memorandum No. 1)	07/01/76 02/10/87
A-114	(revised)	Management of federal audiovisual activities (Transmittal Memorandum No. 1)	03/20/85 08/30/78
A-119	(revised)	Federal participation in the development and use of voluntary standards	10/26/82
A-120	(revised)	Guidelines for the use of advisory and assistance services	01/04/88
A-122	(revised)	Cost principles for nonprofit organizations (Transmittal Memorandum No. 1) (Transmittal Memorandum No. 2)	07/08/80 04/25/84 05/19/87
A-123	(revised)	Internal control systems	08/04/86
A-125		Prompt payment	08/19/82
A-126		Improving the management and use of government aircraft	10/05/83
A-127		Financial management systems	12/11/84
A-128		Audits of state and local governments	04/12/85
A-129		Managing federal credit programs	05/09/85
A-130		Management of federal information resources	12/12/85
A-131		Value engineering	01/26/88
A-132		Federal productivity and quality improvement in service delivery	04/22/88
A-133		Audits of institutions of higher education and other non-profit institutions	03/08/90

FMC AND OMB CIRCULAR GUIDE

OMB No.	FMC No.	Circular Title
A-21	73-8	Cost Principles for Educational Institutions
A-73	73-2	Audit of Federal Operations and Programs
A-88	73-6	Indirect Cost Rates, Audit and Audit Follow-up at Educational Institutions
A-87	74-4	Cost Principles for State and Local Governments
A-102	74-7	Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

RESCINDED OFFICE OF MANAGEMENT AND BUDGET CIRCULARS

A-4 Regulations governing payment of certain travel and transportation expenses of civilian officers and employees of the government stationed outside the continental United States, and TM-1 and TM-2. Circular date 05/02/55. Rescission date 04/30/62. Replaced by A-56.

A-5 Standard forms for reporting accidents and for processing claims under the Federal Tort Claims Act, and TM-1 and TM-2. Circular date 06/05/53. Rescission date 05/20/76. Rescinded by memo (FPMR 101.-11.8).

A-6 Standard forms for requisitioning printing and binding. Circular date 02/10/60. Rescission date 05/20/67. Rescinded by memo (FPMR 101-11.8).

A-7 Standardized Government Travel Regulations, and TM-1. Circular date 08/17/71. Rescission date 08/31/73. Rescinded by memo (FPMR 101-7).

A-9 Enrolled bills. Circular date 07/20/56. Rescission date 06/16/60. Replaced by A-19.

A-10 Responsibilities for disclosure with respect to the budget, and TM- 1. Circular date 11/12/76. Rescission date 07/16/84. Incorporated into A-11.

A-12 Object classifications and TM-1,TM-2, and TM-3. Circular date O7/21/77. Incorporated into A-11.

A-13 Staggering of hours of duty in Metropolitan Washington. Circular date O3/28/67. Rescission date 12/10/71. Rescinded by memo.

A-14 Regulations governing the collection of erroneous payments made to civilian and military personnel. Circular date 09/30/54. Rescission date 04/14/78. Rescinded by memo (FPMR 550-70).

A-15 Provisions of furnishing in personnel quarters. Circular date 05/11/62. Rescission date 10/05/71. Rescinded by memo.

A-17 Clearance of standard and optional forms. Circular date 11/14/59. Rescission date 05/20/67. Rescinded by memo (FMPR 101-11.8).

A-22 Limousines, heavy sedans, and medium sedans in agencies of the executive branch, and TM-1. Circular date 10/17/67. Rescission date 01/31/74. Rescinded and replaced by Bulletins 74-4 and FMC 74-1.

A-23 Restoration of balances withdrawn from appropriation and fund accounts. Circular date 06/21/57. Rescission date 07/09/60. Rescinded by memo. Partially replaced by A-34.

A-26 Additional withholding of tax on wages upon agreement by employer and employee. Circular date 05/02/60. Rescission date 12/13/68. Rescinded by memo (Treasury Fiscal Requirements Manual, Part III, Sec. 3020.20).

A-27 Policies and responsibilities on the sharing of electronic computer time and services in the executive branch, and TM-1. Circular date 06/15/64. Rescission date 08/30/74. Rescinded by memo (FPMR 101-35.2).

A-28 Establishes the three year period 1957-59 as the standard reference base period for federal government general-purpose index number. Circular date 05/10/60. Rescission date 08/17/64. Replaced by TM-2 of A-64.

A-29 General policy covering the furnishing of quarters, subsistence, and laundry services to civilian employees of the federal government in federal hospitals and domiciliary homes. Circular date 09/03/58. Rescission date 11/16/71. Rescinded by memo.

A-30 Federal Employees Uniform Allowance Act. Circular date 08/20/66. Rescission date 04/27/83. Rescinded by memo (M-83-16).

A-31 Distribution of appropriations and other budget authority made to the President. Circular date 02/22/72. Rescission date 08/26/85. Replaced by A-34, TM-11.

A-32 Standard forms for medical examination and clinical and health records, and TM-1. Circular date 05/03/62. Rescission date 05/20/67. Rescinded by memo (FMPR 101-11.8).

A-33 Standards of specifications and utilization: stationery, envelopes, and memorandum and messenger envelope forms. Circular date 03/09/59. Rescission date 12/13/61. Rescinded by memo (GSA Circular No. 253).

A-35 Information on public works programs. Circular date 10/13/64. Rescission date 09/20/72. Rescinded by memo.

A-36 Deferred pay days. Circular date 10/25/48. Rescission date 03/07/83. Rescinded by memo (M8-38).

A-37 Regulations prescribing revised commuted rates of reimbursement for transportation and temporary storage expenses for household goods and personal effects of civilian officers and employees upon transfer of official station within the continental United States, and TM-1 through TM-8. Circular date 12/30/57. Rescission date 04/30/62. Replaced by A-56.

A-38 Furnishing information concerning compensation of federal employees to states and other governmental units taxing compensation for personal services. Circular date 03/25/74. Rescission date 09/23/75. Rescinded by memo.

A-39 Providing of statistical information to intergovernmental organizations. Circular date 04/24/67. Rescission date 04/13/78. Rescinded by memo (SPD-18).

A-40 Management of federal reporting requirements. Circular date 05/03/73. Rescission date 03/31/83. Rescinded by memo (A-11).

A-41 Submission of supplemental estimates and similar proposals. Circular date 02/19/66. Rescission date 07/19/73. Rescinded by memo (A-11).

A-42 Communications with the Congress. Circular date 02/14/57. Rescission date 06/16/60. Replaced by A-19.

A-43 Paper conservation. Circular date 04/19/51. Rescission date 10/05/71. Rescinded by memo.

A-44 Management and review and improvement program, and TM-1. Circular date 05/24/72. Rescission date 03/23/79. Replaced by A-117. (A-117 was rescinded on 03/07/83).

A-46 Standards and guidelines for federal statistics, and TM-1 through TM-6. Circular date 05/03/74. Rescission date 04/13/78. Rescinded by memo (SPD 1-3, 5-9, 11-17).

A-47 Reports and budget estimates relating to federal programs and projects for conservation, development, or use of water and related land resources. Circular date 12/31/52. Rescission date 05/15/62.

A-48 Responsibilities for planning training investments and regulations governing reduction in payments to employees. Circular date 09/23/71. Rescission date 04/27/83. Rescinded by memo (M83-16).

A-49 Use of management and operating contracts. Circular date 02/25/59. Rescission date 02/07/86. Rescinded by M-86-16 (FAR, subpart 17.6).

A-51 Planning and conduct of the United States programs in Antarctica. Circular date 08/04/71. Rescission date 12/12/85. Rescinded by M-86-6.

A-52 Procedures for reports on federal property in Hawaii, and TM-1 through TM-3. Circular date 11/14/60. Rescission date 05/20/66. Rescinded by memo.

A-53 Management Clearing House File. Circular date 05/13/61. Rescission date 06/12/68. Rescinded by memo.

A-54 Policies on selection and acquisition of automatic data processing (ADP) equipment, and TM-1 through TM-3. Circular date 10/14/61. Rescission date 08/30/74. Rescinded by memo (FPMR 101-35.2).

A-55 Annual reports on the utilization of automatic data processing equipment in the executive branch, and TM-1 and TM-2. Circular date 11/15/63. Rescission date 04/20/67. Replaced by A-83.

A-56 Employee relocation allowance regulations. Circular date 08/17/71. Rescission date 08/31/73. Rescinded by memo (FPMR 101-7).

A-57 Review of proposed construction or acquisition of federal hospitals and domiciliary homes. Circular date 08/23/67. Rescission date 09/20/72. Rescinded by memo.

A-58 Estimates and reports on international transactions. Circular date 04/12/68. Rescission date 05/25/71. Rescinded by memo. Partially replaced by A-65.

A-59 The postal zoning improvement plan of the Post Office Department. Circular date 10/08/64. Rescission date 05/25/71. Rescinded by memo.

A-60 Criteria for decentralizing federal activities from the National Capitol Region. Circular date 07/18/63. Rescission date 03/07/83. Rescinded by memo (M-83-8).

A-61 Guides for appraising agency practices in the management of Automatic Data Processing (ADP) equipment in federal agencies. Circular date 08/03/63. Rescission date 07/23/73. Rescinded by memo (FPMR 101-35.2).

A-63 Advisory committee management. Circular date 03/27/74. Rescission date 03/07/83. Rescinded by memo (M-83-8). Replaced by A-120.

A-64 Position management systems, and TM-1. Circular date 07/30/80. Rescission date 06/01/87.

A-65 Reports to the Department of Commerce on international transactions. Circular date 03/05/68. Rescission date 04/13/78. Rescinded by memo (SPD-19).

A-66 Reports on motor vehicle fleets. Circular date 08/06/64. Rescission date 02/02/72. Rescinded by memo (FMPR 101-38).

A-68 Establishment of central supporting service facilities in headquarters and field office locations. Circular date 08/28/64. Rescission date 01/31/74. Rescinded by 34 CFR Part 271.

A-69 Regulations governing payments of all allowances to civilian employees of the United States assigned to duty on California Offshore Islands. Circular date 10/22/64. Rescission date 04/14/78. Rescinded by memo (FPMR 591-11).

A-71 Responsibilities for the administration and management of automatic data processing activities. Circular date 03/06/65. Rescission date 12/12/85. Replaced by A-130.

A-72 Federal employees occupational health service programs. Circular date 06/18/65. Rescission date 04/21/86. Rescinded by M-86-19 (FPML 792-15, 04/14/86).

A-75 Standards form for applications for federal financial assistance for water projects, sewer projects, waste treatment plants, and other public works and facilities. Circular date 12/29/67. Rescission date 10/18/71. Rescinded by memo.

A-77 Regulations governing payment of allowances to civilian employees of the United States assigned to duty at the Nevada Test Site, including the Nuclear Rocket Development Station, of the United States Atomic Energy Commission. Circular date O6/09/66. Rescission date 04/14/78. Rescinded by memo (FPML591-11).

A-78 Reporting requirements in connection with the prevention, control, and abatement of air pollution at existing federal facilities. Circular date 05/18/70. Rescission date 12/31/74. Replaced by A-106.

A-79 Report of accomplishments in the use and management of automatic data processing (ADP). Circular date 07/03/68. Rescission date 05/24/72. Replaced by A-44.

A-80 Coordination of development planning for programs based on multi-jurisdiction areas. Circular date 01/31/67. Rescission date 07/24/69. Replaced by A-95.

A-81 Reporting requirements in connection with the prevention, control, and abatement of water pollution at existing federal facilities. Circular date 05/18/70. Rescission date 12/31/74. Replaced by A-106.

A-82 Coordination of federal aids in metropolitan areas under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966. Circular date 01/10/69. Rescission date 07/24/69. Replaced by A-95.

A-83 ADP Management Information Systems (ADP/MIS). Circular date 10/05/71. Rescission date 04/16/74. Rescinded by memo (FPMR F-100).

A-84 Reporting of federal outlays by geographic location. Circular date 06/29/67. Rescission date 03/07/83. Rescinded by memo (M-83-8).

A-85 Consultation with heads of state and local governments in development of federal regulations. Circular date 01/20/71. Rescission date 10/20/78. Rescinded by memo (EO 12044).

A-86 Standardization of data elements and codes in data systems. Circular date 09/30/67. Rescission date 08/29/73. Rescinded by memo (EO 11717).

A-90 Cooperating with state and local governments to coordinate and improve information systems. Circular date 09/21/68. Rescission date 12/12/85. Replaced by A-130.

A-91 Prompt compilation and relay of statistical information. Circular date 10/21/74. Rescission date 04/13/78. Rescinded by memo (SPD-4).

A-92 Modification of the limitation on the amount allowed for the cost of preparing remains of employees who die while in travel status. Circular date 02/13/69. Rescission date 08/31/73. Rescinded by memo (FMPR 101-7).

A-93 Reports on man-years and personnel costs for federal civilian employment. Circular date 02/08/71. Rescission date 11/17/78. Rescinded by memo (EO 12027).

A-95 Evaluation, review, and coordination of federal and federally assisted programs and projects, and TM-2. Circular date 01/02/76. Rescission date 07/19/82. Replaced by EO 12372.

A-96 Implementation of Sections 202, 203, and 204 of the Intergovernmental Cooperation Act of 1966. Circular date 08/29/69. Rescission date 10/19/71. Replaced by A-102.

A-98 Notification of states of grant-in-aid information. Circular date 06/05/70. Rescission date 08/07/73. Rescinded by memo (Treasury Department Circular No. 1082).

A-103 Guidance for agency implementation of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Circular date 05/01/72. Rescission date 11/20/74. Replaced by FPMR-Chapter A.

A-107 Evaluation of the inflationary impact of major proposals for legislation and for the promulgation of regulations or rules. Circular date 01/28/75. Rescission date 10/20/78. Rescinded by memo (EO 12044).

A-108 Responsibilities for the maintenance of records about individuals by federal agencies. Circular date 07/01/75. Rescission date 12/12/85. Replaced by A-130.

A-111 Jointly funded assistance to state and local governments and non-profit organizations. Circular date 07/06/76. Rescission date 03/07/83. Rescinded by memo (M-83-8).

A-112 Monitoring federal outlays. Circular date 09/01/76. Rescission date 08/26/85. Replaced by A-34 (TM-11).

A-113 Preparation and submission of management plans. Circular date 11/17/76. Rescission date 03/23/79. Replaced by A-117 (A-117 was rescinded on 03/07/83).

A-115 Zero-base budgeting. Circular date 05/05/78. Rescission date 08/07/81. Rescinded by memo.

A-116 Agency preparation of urban and community impact analyses. Circular date O8/16/78. Rescission date 09/09/82. Rescinded by memo.

A-117 Management improvement and the use of evaluation in the Executive branch. Circular date 03/23/79. Rescission date 03/07/83. Rescinded by memo (M-83-8).

A-118 Federal employee parking facilities. Circular date 08/13/79. Rescission date 01/04/82. Rescinded by memo.

A-121 Cost accounting, cost recovery, and interagency sharing of data processing facilities. Circular date 09/16/80. Rescission date 12/12/85. Replaced by A-130.

A-124 Patents: small business firms and non-profit organizations. Circular date 02/10/82. Rescission date 03/28/87. Replaced by 37 CFR 401.

FACULTY INTEREST PROFILES

A cornerstone of research development activities is the ability of an institution, through its research office, to identify which faculty members might be interested in a particular program announcement. The most efficient way to match faculty with programs is to have on file faculty interest profiles which detail those areas of interest and expertise of faculty members. These profiles may be as simple as maintaining interest areas on alphabetically arranged index cards or as complex as computerized keyword matching systems. As an institution becomes larger and more complex, a standardized method of identifying interest areas of faculty and of retrieving that information to disseminate notices of research opportunity becomes more important.

Many institutions have developed in-house methods of identifying which faculty need to receive what information. Some institutions have self-built computerized matching systems which are based on the self-identification by faculty of disciplines or subdisciplines of interest. The appropriate individual in the research office can then simply put the appropriate computerized code(s) on the research opportunities which reach the office and have notices generated to all individuals listing that code as an interest area. An institution may choose to utilize one of the many computerized matching systems available [SPIN (Sponsored Programs Information Network), IRIS (Illinois Research Information Service), etc] or to provide direct faculty access to the databases so that faculty members can themselves search for opportunities and browse in the databases.

Whatever the method chosen, there are certain pieces of information which should be available to the research administrator to help in the identification of individuals able or interested in responding to research opportunities. Although the list below is not exhaustive, it provides a basic set of data points of value about faculty members for use by a research administrator when searching for possible sources of funding and when reviewing proposals for submission to external agencies:

Name
Social security number (optional, but valuable to have as many agencies are now requesting this information)
Academic rank and title
Department/College/Division
Tenure/tenure-track
U.S. citizen/permanent resident
Campus phone number
Campus mail address
Highest degree/date/discipline
Sex
Ethnicity
Language skills
Computer skills
Other specialized skills
Service on review panels (what? when?)
Service on university committees/councils
Interest areas (selections from pregenerated list, if available)

Areas of expertise (identify)
Current funding (sources/amounts/dates)
Proposals pending (sources/amounts/proposed dates)
Consulting arrangements (who? what period? what commitment?)
Relationships with for-profit entities (including equity/stock ownership)
Significant publications and total number of publications
Research honors/awards
Abstract(s) (in layman's language) of proposed areas of research interests for funding searches

This information, once developed, should be updated on at least an annual basis. Valuable to the research administrator in doing specific funding searches and identifying individuals who have a potential interest in a special topic; it is useful in determining which faculty member(s) should receive a particular announcement. For example, there are programs restricted to individuals within 5 years of their terminal degree, to individuals who are U.S. citizens or permanent residents, to minorities, etc. The ability to identify these special constituencies can be important not only for identification of possible outside funding sources but also for other internal institutional needs, such as abilities in a particular foreign language or a particular computer expertise.

ASSISTANCE WITH IDENTIFICATION AND CONCEPTUALIZATION OF PROJECTS AND IDENTIFICATION OF POTENTIAL SOURCES OF SUPPORT

The characteristics of fundable ideas are generally accepted to include the following:

The idea is new and innovative
The idea is timely
A clear need for the project can be documented
The project will make a difference and will influence further steps in the field
The project is cost-effective

These elements should be key in helping the investigator conceptualize a fundable project. Of significance to this discussion, however, is the issue of how involved, if at all, a research administrator should be in the actual writing of the proposal.

An area of significant discussion among research administrators themselves and between research administrators and faculty members is the issue of the amount and type of support given by research administrative personnel to faculty in the identification and development of proposals to external agencies. There is little debate or disagreement about the role of the research administrator in the identification of potential sources of support for a specific project. This is generally seen as a primary responsibility of the research office, although a few institutions see this role as a responsibility of the faculty member and believe the institution's role is simply to make resources available to the faculty member for searching. Undergraduate institutions and institutions seeking to expand dramatically their externally supported research activities generally provide greater support to faculty in seeking to identify potential funding sources.

The extent to which a sponsored program administrator can assist a faculty member in conceptualizing the research activity itself depends not only on whether the administrator has specific expertise in the field of research but also upon the extent to which the administrator has experience in dealing with personnel from the agency being solicited. Contacts with the agency can be valuable in helping a faculty member conceptualize the project and channel the proposal in a way that might increase its chances of support. Individual consultation between a research officer and a faculty member on projects in their early developmental stages can often be useful in identifying specific sources which might be approached for funding, particularly if the scope of work of a proposed project can be made compatible with an agency's announced priorities. Faculty members, particularly those less experienced in the grantsmanship arena, often conceptualize extremely broad-based projects where a narrowing or channeling of specific objectives is better able to generate support. In this area, a research administrator can arrange for telephone and in-person contacts with public and private agencies. A research administrator's discussion with program officers to describe institutional interests and capabilities often results in more detailed and technical contacts between a program officer and a faculty member. Campus visits by agency personnel can also be extremely

valuable to a faculty member seeking support as there is the opportunity for one-on-one discussions between the faculty member and program personnel of the funding agency.

More extensively debated is the extent to which a research administrator should be involved in the writing of a proposal for external funding. Many federal agencies have made changes recently in their proposal guidelines to mandate certain page limitation (and even type size restrictions) on proposals submitted to them. Certainly a research administrator should be involved early enough in the development of the proposal to make the principal investigator/project director aware of these agency restrictions and limitations.

Additionally, to the research administrator falls the task of completing representations and certifications that become an integral part of the proposal when it is submitted to an external organization. Often faculty members (particularly those new to an institution) need help in writing an "institutional capability" section of a proposal, giving some broadbrush institutional history and capability. Research administrators can be helpful in that regard and can provide necessary support to the development of an institution-wide proposal which requires substantial administrative information be included.

However, in the preparation of the technical sections of a proposal, the research administrator can best help--if requested--by providing editorial support and services to the person actually doing the writing. After all, the person who is the technical expert in the field is the individual who can best communicate the enthusiasm and excitement of the project to a reviewer and who, particularly on scientific and engineering proposals, is knowledgeable about the research itself.

The greatest help a proposal development specialist can give is to provide comment and advice, if requested, and to urge that the faculty member have his proposal read and critiqued by another faculty member in the same disciplinary field.

Finding sources of support for a project, once it has been conceptualized, may provide a challenge to a research administrator. Using keywords, discipline matching, computerized databases, newsletters, or agency updates, etc. is a standard approach. The sources identified earlier provide a starting point for finding funding possibilities. Reviewing publications, newspapers, and magazines can be helpful. There are many sources of support other than the federal or state governments and care should be taken not to overlook foundation and corporate directories. Occasionally a review of the tax returns of foundations may provide useful information on what they may fund. At the federal level not only are the agency announcements useful, but the actual testimonies before Congressional committees can be a valuable information source for specific agency priorities.

Faculty members should be encouraged to think broadly about the types of sources that might support their activities and, unfortunately, need to understand when no specific funding sources can be identified for a particular line of research. When this happens, it is often useful to offer the faculty member access to any (particularly computerized) databases available in the research office so that the faculty member may search independently.

PREPARATION OF PROPOSALS AND PREPROPOSALS

Proposals

Many agencies (including most federal agencies) have prescribed formats for proposal preparation, including the required forms for text, biographical data, and budget. Increasingly, agencies have mandated page length and type size limitations for the proposal and have indicated that proposals not meeting those requirements will not be processed or reviewed,[1] thereby burdening research administrators to ensure that proposals meet all the specific criteria of the agency. Often this increased review has resulted in a lengthening of time such an office needs to review proposals before they are signed and submitted to the external agency.

Specific agency formats for federal agencies are available in agency publications and program announcements. If it is unclear whether an agency has a specific set of regulations governing page length, vita preparation, etc. the research administrator should contact the agency directly before processing the proposal.

The writing of a proposal is a time consuming and emotional activity. Even after the proposal is written, the adage "if anything can go wrong, it will" is operative. An experienced research administrator--in working with a faculty member on a timeline for the development and production of a proposal--will always add a few extra days to make up for the delays which seem to accompany the finalization of any proposal. Sometimes the problem is getting signatures, sometimes receiving approval from internal committees, sometimes the word processor stops working and the copy machine quits. Nonetheless, the deadline for receipt at the agency stays the same.

In writing or reviewing a proposal, the following may be useful:

1) Read the proposal guidelines carefully several times, using a highlighter to note important aspects. Pay particular attention to eligibility and determine whether the proposers are, in fact, eligible to submit and receive funding on the specific program being reviewed.
2) Secure commitments from the department, the dean, and other institutional officials where necessary before beginning the actual writing.
3) Involve others, where appropriate, to identify needs and approaches (this is particularly valuable on training programs and institutional proposals).
4) Develop a timeline for writing the proposal. If others are involved (for example, on a program project grant or a centers of excellence proposal) schedule meeting dates for the proposal team. In developing the schedule, leave adequate time for each person to write sections of the proposal and allow for collaboration in that writing where appropriate.
5) Outline the proposal and assign specific tasks and deadlines.

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[1]Most recently, the National Science Foundation has announced that proposals not meeting their page length limitation will, after appropriate administrative review, be destroyed and a notice to that effect transmitted to the institution. The only exception to this policy is a program officer request that the page length/type size limitations be suspended.

6) Keep reviewers in mind as the proposal is written. If the proposal announcement includes specific values for individual sections of the proposal, keep these values in mind while writing; among other attributes, values can often be a hint as to the relative length of the sections.
7) Write a draft of the proposal, then edit it for clarity and grammar. Don't write the abstract or summary until the end.
8) Ask a knowledgeable outsider to read and critique the proposal.
9) Allow time for institutional review, signoff, and copying. Remember that deadlines are often receipt deadlines, not mailing deadlines.
10) Follow-up on the proposal in a timely fashion after it is submitted.

For agencies which do not have specific proposal formats, the following is one way to suggest that the principal investigator/project director organize the proposal:

1. Internal transmittal form (this is an internal document and is *not submitted* to the agency)
2. Letter of transmittal (optional)
3. Title page
4. Technical abstract
5. Table of contents
6. List of tables (optional)
7. List of figures (optional)
8. Introduction
9. Objectives
10. Procedures
11. Evaluation
12. Dissemination
13. Equipment and facilities
14. Personnel
15. Budget
16. Curriculum vitae
17. References (literature cited)
18. Appendices (if needed or required)

Each of these items is described in more detail below.

1. Internal Transmittal Form

The internal transmittal form, available from an institutional official, provides the institution with necessary data concerning the proposal itself. The internal transmittal form is never submitted to the agency, but is retained by the institution in its official proposal files. This form should identify the deadline for the proposal -- and whether that is a receipt or mailing deadline.

It includes appropriate sign-off of responsible institutional officials. Although the number of individuals who are required to sign the transmittal form varies according to

the institution and its internal practices, the signature of the principal investigator/project director, department chair(s), dean(s), and research officer are generally the minimum signatures necessary on such a form.

At the department chair and dean level, the transmittal form should include a statement that, once approved, commitments made by those officers (if any) outlast the tenure of the individuals in those positions. Other possible signatures on the transmittal form may include the chair of the Institutional Animal Care and Use Committee (IACUC), the Institutional Review Board (IRB), the Academic vice president, the chief fiscal officer, the computing center director, the head of the facilities department, etc. In recent years the trend has been to fewer, rather than more, signatures on the internal transmittal form, relying on administrative policies in the research office to ascertain what signatures beyond the chair and dean are necessary.

The internal transmittal form is the document in which special needs and requirements related to the proposal itself are considered [salary increments for future (called "out") years, fringe benefits, matching or cost-sharing funds, space needs, etc], where compliance requirements are detailed (use of animals, humans, radioactive or hazardous materials, specialized equipment needs, subrecipient relationships, etc.), where the investigator certifies that he complies with certain (federal) regulations (debarment, lobbying, non-delinquency, intellectual property, conflict-of-interest, etc). Samples of three[2] internal transmittal forms begin on page 49. The specifics to which the principal investigator, the department chair, and the dean are certifying by their signatures are discussed beginning on page 55.[3]

2. **Letter of transmittal**

In the past, letters of transmittal were a popular and accepted way to identify to an agency the name and telephone number of the principal investigator (for technical questions) and the university official (for administrative and financial questions). In addition, the letter of transmittal was often used as a method to help direct a proposal to a particular review body or to identify specialized characteristics about a proposal that the institution (and the investigator) felt were of particular importance. Letters of transmittal are still used by many institutions, but (particularly to federal agencies) their use has diminished as agencies have not only imposed page limitations, but also the information that had been included in the transmittal letter is now on the cover page of the proposal itself. When used, the project director should be asked to provide a sentence about the research--understandable to a sophisticated lay person--to include in the text of the transmittal letter.

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[2]The author acknowledges gratefully permission to include the internal transmittal forms of Cornell University, University of Houston, and University of Rochester.

[3]These endorsement specifications are from the University of Houston.

3. **Title Page**

The format of this page, also known as the cover page, may be specified by the sponsoring agency. In the absence of a specific format by an agency, a suggested title page would include the following information:

Title of proposal (some agencies limit the title to a specific number of characters)
Agency to whom proposal is being submitted
Name and address of submitting institution (use the address of the research office, not the address of the principal investigator)
Name and social security number of principal investigator
Proposed amount
Proposed effective date
Proposed duration
Signature lines/telephone numbers/fax number and E-mail address for principal investigator/project director and official signing for the institution
Current date

4. **Technical abstract**

Most investigators find that the technical abstract is the last portion of the proposal to be written. It should be a very condensed summary of the proposal, usually no more than 200 to 250 words, stating concisely the significance of the research, what is to be accomplished, how it will be accomplished, and the time span of the project. Underlining key words may aid the reviewer or may help the proposal be assigned to a particular office within an agency. The abstract is extremely important in creating a favorable first impression of the entire proposal.

5. **Table of Contents**

This section should list the major sections of the proposal, particularly if it is a long and complex proposal, and give the specific page location where each section begins in the proposal. It need not include all the subheadings but should be detailed enough to allow reviewers to find the sections in which they have an interest without having to search through the entire proposal. Preparing a table of contents can also allow the proposer to compare the proposal with the sections in the agency announcement to ascertain that the proposal is organized as required by the agency.

6 & 7. **List of tables and list of figures**

Some proposals include specific technical data presented in tabular or graphic form. Although a listing of tables and figures is not required, there are proposals in which the quality and presentation of the proposal will be significantly enhanced by their inclusion.

8. **Introduction**

The introduction, also often called the statement of need, should emphasize the importance of the project--nationally, regionally, and (where appropriate) locally--and should summarize previous research in the field, including the research of the principal investigator and his colleagues. The relationship of the project to the funding agency may also be tactfully stressed. The introduction sets forth the major focus of the proposal.

9. **Objectives/Outcomes**

This section and the section that follows (Procedures) are the heart of the proposal. The principal investigator should go into as much technical detail as necessary (and as space allows) to explain what is intended to be done and how the project will be accomplished. These sections will be reviewed by an expert in the field. Where objectives are listed, each objective should be tied to a need specified in the introduction, and for each objective, a procedure should describe how that objective will be accomplished.

The objectives should state the intended outcome of the project, not the procedures to be followed in the project. That the objectives, both general and specific, be well thought out and carefully presented is of the utmost importance. If they are poorly defined, the time frame may be unrealistic and the budget inadequate.

10. **Procedures/Program Description**

This section gives the details of how the principal investigator/project director will carry out the program. Procedures may be organized in several different ways: by activities tied to specific procedures, by functional categories such as planning, development, and implementation, or by major time blocks. If the project is a large one, it may also be advantageous to include an explanation of how it will be administered and define the responsibilities of the various components of the proposal, how an advisory committee (if included) will be selected and will function, and how subrecipients will be identified and utilized. A proposal can be greatly strengthened if letters of agreement to participate from cooperating entities are included as an appendix to the proposal. Many institutions have policies in place which *require* that cooperating entities have formally approved agreements from their organizations forwarded to the prime proposer prior to the submission of the proposal.

This is also the appropriate section in which to provide a time line for the work to be accomplished. The proposer should be realistic about the time it will take to complete the scope of work and be sure to leave time at the end for preparation of the final technical report to the agency.

There is often a temptation to try to circumvent page length limitations by including tabular data in an appendix. Although this can be a valuable device when no page limitations are specified by an agency, some agencies restrict what can be in an appendix and others do not distribute appendices to reviewers. If this data is critical to

a full understanding of the proposal, it should appear in the basic text and not be relegated to appendices.

11. **Evaluation**

This is an important component of all proposals but becomes even more significant on training projects and on educational and service programs. The evaluation section specifies what the institution will do in evaluating the success of the project and how well the objectives were met. To show that a hypothesis was correct is not always necessary; often, proving that it was incorrect can itself be a valuable research outcome. Many projects mandate that a formal evaluation be undertaken; in such cases, the proposer should spend the time necessary to identify, and secure, the services of an unbiased expert in the field to undertake this review.

12. **Dissemination**

Agencies which fund projects (whether research, development, demonstration, instruction, public service) need to know that the results of that project have been or will be disseminated. While projects generally result in published papers in professional journals, many agencies often require or request additional means of dissemination, such as in the form of a conference or workshop, project newsletter, production of audiovisual materials, travel to a meeting to report on the results of the project, etc. Costs of such dissemination, where appropriate, should be included in the project budget and the method of that dissemination clearly identified in the narrative section of the proposal.

13. **Equipment and Facilities**

This section should be used to describe the equipment and facilities already available to carry out the proposed project. So that reviews do not question whether an institution has the wherewithal to carry out a complex project, care should be taken to describe in detail the equipment and facilities currently available to support the project, and the items that are not available but will be included in the proposal.

14. **Personnel**

The proposal will include the curriculum vitae of all key personnel to be involved in the project (see item 16). Here, however, there exists an opportunity to include an introductory statement identifying the principal investigator/project director, co-project directors, the name of other professional personnel included on the project, and the number of graduate students and support staff to be directly involved. Where specialized personnel (glassblowers, instrument technicians, computer specialists) will be provided without cost to the project, they should also be specified. Care should be taken, however, to identify clearly who the *key personnel* are on the project. If the proposal results in a contract, these key personnel [normally identified only as the principal investigator(s)/project director(s)] will be named as essential to the program and changes in these individuals cannot be made without agency approval.

15. **Budget**

The budget should estimate the costs necessary to carry out the research described in the proposal. This part of proposal preparation is one of the most complicated and time-consuming and one area where a research administrator can be of great help to an investigator. The investigator's role is to estimate with reasonable accuracy the major costs of carrying out the work; the research administrator's role is to mold those costs into a budget which includes all significant components of the funding needs and specifies which of those components are being requested from the agency and which will be provided by the institution or by third parties. The next section of this document is devoted to an extensive discussion of budget preparation.

16. **Curriculum Vitae**

This section includes the biographical data on all professional personnel, including an identification of which of those professional personnel are considered as key personnel by the institution. Each individual's vita should include background, interest areas, academic qualifications, research capabilities, and pertinent publications. Many agencies are now limiting the size and scope of the vita.[4] Investigators and institutions should be cognizant of these limitations and provide the information most significant in the review of the specific proposal being prepared.

17. **References**

The literature search performed in connection with the development of any proposal should be complete enough to allow a list of references to accompany the final proposal. This list should be as current as possible at the time the proposal is prepared and should cite the most important recent advances in the field. It should demonstrate that the proposer is aware of the work going on in the field and can contribute in a substantive way to the expansion of knowledge in that field.

18. **Appendices**

Some agencies now severely limit what can be included in the appendix. Certainly one should include any data necessary for a full and fair evaluation of the proposal when for a specific reason that information cannot be included in the body of the proposal itself. Where possible, a proposer should limit the appendix to information the agency has specified may be included in the appendix section of a proposal. Some agencies (most notably NSF) specifies that reviewers do not have to incorporate the appendix material into their reviews; in such cases a proposal is hindered by attempting, for example, to circumvent page limitations by use of appendices.

Once a proposal is completed (both the narrative and budget sections) and ready for submission, a check should be made to ensure that the proposal is in conformance

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[4]For example, NSF and NIH. See samples of vita page 60 (NIH) and current and pending support pages (NIH and NSF), pages 61-62.

with the guidelines of the potential funding agency and includes all relevant documentation. The proposer and the institutional reviewing official should ask themselves the following questions:

Eligibility. Is the institution eligible to apply for these funds? Have all appropriate criteria been considered and special circumstances described in the proposal?

Program. Is the project/program in line with the mission and goals of the department? of the college? of the institution? Are the objectives clear, succinct, and do they communicate the need for the program or project? Is the narrative consistent with the budget?

Space. Is sufficient space available? Is there a commitment for additional space, if necessary, to carry out the project? If space must be renovated, has it been identified and have the funds for the renovation been allotted?

Salaries. Do the salaries reflect current salaries of personnel? Are adequate increments for future years reflected? Are fringe benefits included at the proper rates? Will the activity require additional staff? Are they included in the proposal budget?

Publications. Are key personnel free to publish the results of their research? Are funds for publication included in the budget?

Technical and financial reports. Are the number, frequency, and comprehensiveness of periodic program and financial reports appropriate and in line with the requirements?

Budget. Is the budget sufficiently detailed? Have all necessary direct cost items been included? Have increments for future years, if appropriate, been considered? Are indirect costs, at the appropriate rate, included? Are cost-sharing, matching, and third party contributions adequately described and calculated?

Vitae. Are sufficiently detailed vitae for all professional personnel included? Do they conform to agency requirements?

Completeness. Is the proposal complete and ready to submit? Are all certifications and representations included? Have appropriate clearances from institutional review boards been secured?

One useful way to insure that this occurs is to have available to the research administrator a checklist for personal use that details all the necessary components of such a review. A sample of such a checklist appears on page 57.

A final word about proposal development: Be sure to understand and apply the knowledge gained during the development and review of one proposal to other proposals. Knowing problems that have been identified by reviewers can help strengthen proposal development. Attached is a listing of common proposal problems which have been identified by reviewers. Many of the items specified are technical in nature and relate

to the content of the proposal, but some refer to administrative matters which are within the context of the research office review.

Preproposals

Often the submission of a preproposal to a federal agency is recommended (or required) in advance of submission of a final proposal. In addition, submission of preproposals is a tool to consider when submitting to a foundation or corporate sponsor.

A preproposal is, essentially, an expanded abstract normally consisting of 3-4 pages of narrative describing the research program to be undertaken and the expected outcomes of that activity. Since by its very nature it is a *pre*-proposal, it is not encumbered by the certifications and representations normally associated with full proposals and does not include the full, detailed, and justified budget normally required of complete proposals. Preproposals are welcomed by private foundations and corporate sponsors and, if carefully constructed, can be very helpful in establishing a record of achievement and knowledge in an area which can be helpful in securing funding.

At the federal level, preproposals are often screening devices to determine which organizations will be eligible to submit full proposals. In such cases, preproposals must be constructed with care, knowing that--if acceptable--a full proposal will follow. In such instances, the faculty member is well advised to consult with the research administrator to ascertain whether the institution can submit a full proposal if the preproposal is accepted. At the same time, some detailed work on a budget is a good idea, so that the preproposal can estimate realistically the costs of the project. Depending upon the program, full sign-off is sometimes required on federal preproposals.

At the foundation and corporate level, the situation is somewhat different. Because most of these sponsors consider a preproposal an inquiry about possible interest, most potential corporate or foundation sponsors do not require that preproposals be signed off by the institution; however, many institutions request that information copies of preproposals be sent to the sponsored projects office. It is not unusual that a foundation or corporate response to a faculty member be an actual award of funds. When the faculty member has not consulted his research office, this situation can often prove embarrassing to all parties, particularly if the proposer has not considered fringe benefits, increments in future years, or indirect cost. For this reason, many institutions suggest that budgets, at a minimum, be reviewed by the research office prior to submission of the preproposal.

When a faculty member is considering a foundation or corporation as a potential sponsor, cooperation with the development office is essential. Many institutions have found that this is another strong rationale for contact with a sponsored projects office at the preproposal stage. Since most institutions have policies and procedures that specify the way approaches are made to non-federal sponsors of projects and since one must be cognizant of these requirements, the sponsored projects administrator can be a useful ally in developing these contacts. It is strongly recommended that institutions establish internal policies on what activities are handled in a sponsored projects office and what are handled in a development office. Such a policy can serve to avoid problems and can aid in working with faculty in identifying possible sources for additional funds. One

recommended approach is to define clearly at the institutional level what is a *gift* and what is a *grant*. Although variations exist, the questions to consider include the following:

1) Is a product (including a formal report) expected?

2) Does the project include the requirement for certification and review of certain actions (such as humans as subjects, animal care, etc.)?

3) Is the source of the funds a federal or state agency?

4) Are there any specific financial and/or technical reporting requirements specified in the award document?

5) Will there be any commitment of university facilities, personnel, or other resources?

6) Are there any restrictions on the specific uses of the funds

7) Are indirect costs allowable?

If the answer to any of these key questions is "yes," the funding is probably a grant, not a gift. Attached is a set of criteria which may be of further help in responding to this issue (page 63).[5]

In preparing a proposal, it is important to remember that a development office may be able to provide additional information which would make a preproposal to a foundation/corporation stronger or more acceptable. Every avenue should be explored in an effort to submit the best and strongest document possible.

[5]Acknowledgement is made to Mr. Gary Chaffins of Arizona State University for this document.

OSP # _____
(assigned by OSP)

CORNELL UNIVERSITY

FORM 10

INTERNAL ACADEMIC APPROVAL OF SPONSORED PROGRAMS

Sponsor's Receipt Deadline Date _____

Sponsor's Postmark Deadline Date _____

☐ ASAP (no published deadline)

☐ New Proposal ☐ Renewal (Competitive) ☐ Continuation (Noncompetitive) Grant/Contract # _____

☐ Pre-Proposal ☐ Revised Proposal ☐ Modification of Grant/Contract # _____

1. Project Director/Principal Investigator _____ Phone: _____
   Campus Address _____ S.S. # _____
2. Administering Department or Center _____
3. Project Title: _____
   _____
4. Sponsor _____
   Mailing Address _____
   _____
   _____
5. Project Period (dates): Starting _____ Ending _____
6. Amount Requested from Sponsor: Total $ _____ First Year $ _____
7. Will this project involve humans as subjects of research, including survey respondents? If yes, 3 copies of the proposal with an explicit description of the manner in which human subjects are to be used must be submitted for the approval of the University Committee on Human Subjects, 120 Day Hall, 5-5014. (Guidelines available from OSP, or on-line in CUINFO) YES ____ NO ____ If yes Date sent to UCHS ____
8. Will this project use DNA or RNA molecules, viruses, bacteria, cells, or organisms constructed with Recombinant DNA methodology or techniques If yes, a Memorandum of Understanding and Agreement (MUA) must be sent to the University Committee on RDNA Research (120 Day, 5-5014) prior to initiation of these experiments. (Guidelines available from OSP) YES ____ NO ____
9. Are there any potential health or safety risks to project personnel arising from activities conducted oversees? If yes, the Principal Investigator must review the "University Guidelines for Conducting Sponsored Research Overseas" with project personnel. (Available from OSP, or on-line in CUINFO) YES ____ NO ____
10. Will live vertebrate animals be used? If yes, please submit an animal protocol form to the Institutional Animal Care and Use Committee (IACUC, 221 VRT, 3-3516) unless an existing approval will still be valid. YES ____ NO ____
11. Is there any planned or potential use of hazardous agents (i.e. infectious agents, toxins, mutagens, carcinogens, or explosive chemicals)? If yes, please provide OSP with an additional copy of the proposal. YES ____ NO ____
12. Is there any planned or potential use of radioactive materials? YES ____ NO ____
    If yes: Radioisotope Permit # _____
    Issued to _____
    (You must be a permit holder or authorized under a current permit)
13. Is there any planned or potential use of the following:
    (a) Ionizing radiation device? (e.g., accelerators, x-ray machines (diagnostic, therapy, diffraction, CHESS), electron-microscope, reactor or fusion device) SPECIFY TYPE _____ YES ____ NO ____
    (b) Non-ionizing radiation device? (e.g. laser, infrared, ultraviolet, microwave, radio frequency, or ultrasonic) YES ____ NO ____
    SPECIFY TYPE _____

14. Source of Cornell Cost-Sharing

Not Applicable _____	
College _____	$ _____
Department _____	$ _____
University _____	$ _____

15. If Applicable: External Matching Funds

Source (identify) _____ $ _____

16. If the project will require any of the following, please identify the resources needed, their estimated costs, and explain below your plans to cover these costs.

- ☐ Renovation, construction or rental of space
- ☐ Expanded utility (or network) services to support proposed additional equipment, e.g. computers, fume hoods, air-conditioning
- ☐ Purchase (or maintenance) of equipment, apparatus or furniture with funds not included in the proposal
- ☐ Additional personnel requiring funds not included in the proposal or likely to require support or space after the project period

_____

_____

_____

17. Does the Principal Investigator or other key personnel on this project have any current or pending obligations which could create a conflict of interest if this proposal is funded? Involvement in multiple sources of funding, whether federal or private, brings with it the possibility of conflicting contractual obligations. Examples might include ownership of research data, copyrights, patents, the use of proprietary information, the use of equipment, or private consulting activities. YES _____ NO _____ (If yes, attach an explantion)

18. STATUTORY PROJECTS ONLY

(a) This project will be carried out in conjunction with the following College project(s) Hatch _____ State _____ YES _____ NO _____

NOTE: If there is no active College project covering this work, a new project number will be assigned when the proposal is funded following completion of CRIS Form AD 416.

(b) Has the State Finance Office been furnished a copy of the New York State Advance Notice of Federal Grant Application? YES _____ NO _____

19. COLLEGE OF ARTS AND SCIENCES PROJECTS ONLY

Will this project involve:

(a) Faculty leave or release time from teaching? YES _____ NO _____

(b) Waiver of any indirect costs? YES _____ NO _____

If you respond YES to (a) or (b) above or to Items14-16 above, the proposal should be discussed in advance with the appropriate Dean in the college of Arts and Sciences and his/her signature should be obtained on this form before it is forwarded to the Office of Sponsored Programs.

In addition to the number of copies required by the potential sponsor , please accompany this form with a copy of the proposal for OSP and each individual approving this proposal, as well as copies required by affirmative answers to questions 7 and 11 above.

APPROVALS:

_____

Project Director/Principal Investigator

This proposal has been reviewed and is compatible with the objectives of the Department(s), Center(s), involved and the unit accepts the cost-sharing obligation specified in Item 14, if any.

_____ _____

(Department/Section/Laboratory) Head or Chair Dean/Director of Research

_____

Where applicable: (Center/Division)Director

OSP 1/23/92

UNIVERSITY OF ROCHESTER PROPOSAL SIGN-OFF FORM

(This form should be completed and submitted with the proposal to ORPA after all the necessary signatures have been obtained.)

Principal Investigator _____ School/College _____ Dept. _____

Co-Principal Investigator _____ Sponsor _____

Project Title _____

Proposed start date _____ End date _____ 1st year budget _____ Project period budget _____

Proposal type: ___ New ___ Continuation ___ Supplement ___ Resubmission ___ Renewal Deadline: _____

Purpose: ___ Research ___ Training ___ Fellowship ___ Service ___ Clinical Trial ___ Other Pooled Cost Rate: _____

Project Location: ___ On-Campus ___ Off-Campus (Location: _____)

ADMINISTRATIVE AND POLICY CONSIDERATIONS

Yes	No	
☐	☐	1. Will equipment purchased for the project require renovations or modifications to current University facilities (including expanded utility service to support additional equipment, e.g. computer, fume hoods, air-conditioning units). If yes, describe on reverse.
☐	☐	2. Will project require new space? If yes, secure approval of Chair and Dean.
☐	☐	3. Does sponsor require mandatory cost sharing or matching funds? If yes, describe source and detail of University cost sharing, contribution, or match on reverse.
☐	☐	4. Is proposal using human subjects? If yes, attach copy of Research Subjects Review Board approval form.
☐	☐	5. Is proposal using animals? If yes, attach copy of University Committee on Animal Research approval form.
☐	☐	6. Does proposal request a computing system (excluding personal computers and peripherals) exceeding $10,000? If yes, project should be discussed with Vice Provost for computing.
☐	☐	7. Do any of the involved researchers have consulting arrangements, line management responsibilities, or substantial equity holdings in the sponsor or subcontractor? If yes, describe on reverse.
☐	☐	8. Does proposal request maximum salary reimbursement as required for project and pooled costs as allowed by sponsor?
☐	☐	9. Do you think that the proposal contains ideas, processes, or principles which could be commercialized?
☐	☐	10. Does proposal require that a portion of the work be subcontracted to another institution?
☐	☐	11. Are you currently debarred or suspended from doing business with the federal government?

OBTAIN FOLLOWING SIGNATURES AS APPLICABLE TO THIS PROPOSAL

☐ ☐ A. Is proposed project using space or facilities of Strong Memorial Hospital? If yes, obtain **Signature of Director of Financial & Administrative Services, SMH**:

_____

☐ ☐ B. Will project require resources of the University Vivarium? If yes, obtain **Signature of Vivarium Director:**

_____

☐ ☐ C. Will project require resources of the General Clinical Research Center? If yes, obtain **Signature of GCRC Director**:

_____

☐ ☐ D. Will project require services of the Division of Biostatistics? If yes, obtain **Signature of Director, Division of Biostatistics**:

_____

☐ ☐ E. Will project involve biohazards or carcinogens or recombinant DNA? If yes, obtain **Signature of Executive Secretary, Biosafety Committee**:

_____

☐ ☐ F. Will faculty or staff from other University departments, divisions, or units participate in this project? If yes, obtain **Signature of Participating Department Chair(s) Dean(s)**

_____ _____

_____ _____

REQUIRED SIGNATURES:

Principal Investigator: _____

Dept. Chair: _____ Dean: _____

ORPA Assignment: _____ Date: _____

ORPA Form #114 Rev. 11/88

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EXPLANATION OF ITEMS FROM FRONT (if required): _____

PURPOSE OF PROPOSAL SIGN-OFF

The University proposal sign-off form is a "checklist" of administrative, policy, and fiscal issues affecting sponsored projects. The form is a series of questions prepared to assist you and University reviewers assess potential risks and obligations which could be faced in the event that your project is supported. The questions reflect considerations to be deliberated, commitments to be acknowledged, and certifications to be documented prior to submitting a proposal to a sponsor.

DESCRIPTION OF PROPOSAL SIGN-OFF RESPONSIBILITIES

PRINCIPAL INVESTIGATOR: The PI is the initiator and director of the proposed program. The PI's signature indicates that he/she will adhere to University and sponsor policies affecting the project, including completion of an Employee Intellectual Property Agreement. This includes the monitoring of expenditures and the submission of reports required by the sponsor and the University.

DEPARTMENT CHAIRPERSON: The Chair's signature means that agreement has been reached regarding the amount and type of departmental resources that will be required to assist a PI in completing a project. If new space, personnel, or renovations are required, further discussion with the appropriate Dean's office will be necessary.

DEAN'S OFFICE: The Dean's office signature means that agreement has been reached regarding the amount of School or College resources required to support the program. The Dean's office ensures that appropriate salary and pooled costs are requested in sponsored projects. As well, the Dean's office participates in discussions of new space or renovations required to complete a project.

OFFICE OF RESEARCH AND PROJECT ADMINISTRATION: ORPA reviews proposals to ensure compliance with sponsor guidelines and University policies. ORPA serves as the final "checkpoint" to ensure that all appropriate University officials have had an opportunity to review the proposal. (ORPA River Campus Office, 518 Hylan Building, X54031; ORPA Medical Center Office, Room 1-6124, X54034.)

OTHER SIGNATURES WHICH MAY BE REQUIRED DEPENDING UPON THE NATURE OF THE RESEARCH

VIVARIUM: Projects which require animals to be housed in the University Vivarium require sign-off by Dr. Alan Kraus, D.V.M., Director of the Vivarium, Room G-6718, Medical Center, X52651. **All** University projects using animals must be reviewed by the University Committee of Animal Research (UCAR).

BIOHAZARDS: Projects which propose the use of potential biohazards, including recombinant DNA and carcinogens, must be reviewed by Robert Wilson, Ph.D., Executive Secretary of the Biosafety Committee, River Road Lab, X53241. This signature is required to comply with federal and state regulations covering biohazards.

BIOSTATISTICS SERVICES: Projects which involve biostatistics must be approved by the Division of Biostatistics, Room 3-8814, Medical Center, X52404. This signature ensures that adequate costs and professional effort have been included to support biostatistical studies.

STRONG MEMORIAL HOSPITAL: Projects which involve facilities, services, or training programs of Strong Memorial Hospital require the signature of John Wynne, Jr., Director of Financial and Administrative Services, Room 1-2411, Medical Center, X53300.

GENERAL CLINICAL RESEARCH CENTER: Projects which will require beds, space, or staff of the General Clinical Research Center should be reviewed by Dr. Laurence Jacobs, Director, General Clinical Research Center, Room 4-4442, Medical Center, X55295.

Notice of opportunity came from:
___ OSP
___ Program Officer_____
___ Publication_____
(identify)

UNIVERSITY OF HOUSTON
Transmittal Form for Proposal Review and Approval
Completed form required for Proposal Processing
Submit to the Office of Sponsored Programs

___ New Project
___ Revised Budget
___ Competing Renewal
___ Non Competing Continuation
_____
Current UH Budget No.

Project Director:_____ **Dept:**_____ **Ext:**_____

Title of Project:_____

_____

Proposed Effective Dates:_____ _____ **Duration** _____ **Years**
Begin End

Total Direct Costs $_____ **Total Indirect Costs $**_____ **Total Funds Requested $**_____

Note: OSP requires at least three working days in order to process (i.e., review the proposal, make all necessary copies and package for mail pick-up.) If overnight mail is required an account must be provided to cover the expense. Proposals which do not meet this deadline will be reviewed, but the P.I. will be responsible for copying and mailing the proposal.

Sponsor's Name and Mailing Address: (Street address, building and room numbers must be included for proposals being mailed by overnight mail.)

Sponsor's Name: _____

ATTN: _____

Street Address: _____

Bldg./Room No: _____

P.O. Box: _____

City, State ZIP: _____

Sponsor's Phone No: _____

_____
Deadline Date

____ Postmark deadline
____ Receipt deadline
____ Regular mail by OSP
____ Overnight carrier
_____ Budget #
____ Total number of copies including original

APPOINTMENT/CITIZENSHIP: U.S. Citizen: YES____ NO____
Title of Position at UH: _____
Permanent resident: YES___ NO___
Employment Auth.: YES____ Expiration Date_____ NO____

EQUIPMENT MATCH:
YES____ Amount_____ Source_____
NO____

PROJECT COST SHARING:
Have you committed to cost share in this proposal? YES____ NO____
Percentage of effort _____
Other cost share commitments_____

PROJECT SPACE:
Is space other than current office or lab necessary? YES____ NO____
If yes, identify_____

INDIRECT COSTS:
Does the sponsor limit or forbid indirect cost? YES____ NO____
If yes, maximum percentage allowed _____

SUBRECIPIENT AGREEMENTS:
Does the proposal involve a subrecipient? YES____ NO____
Attach a signed offer, detailed statement of work, a budget, and appropriate certifications.

PRIOR INSTITUTIONAL APPROVALS:
_____ creation of new organizational unit
_____ creation of new degree program
_____ alterations to existing space
_____ employment overload
Attach appropriate University approvals for any of the above listed circumstances.

HUMAN SUBJECTS:
Does this project involve human subjects?
YES____ NO____
If yes, approval date_____
application pending, date submitted_____

ANIMALS:
Does this project involve the use of animals?
YES____ NO____
If yes, approval date_____
application pending, date submitted_____

OTHER SAFETY COMMITTEE REVIEW:
____ Radiation safety
____ Chemical safety
____ Biosafety (includes recombinant DNA)
Date of approval _____

APPROVAL SIGNATURES

INVESTIGATOR'S STATEMENT: Except as covered by written authorization for this project, this application does not obligate the University for funds for additional facilities, equipment, remodeling, extra operating funds, or matching funds, nor for the establishment of new organizations, courses, or programs not previously approved. For Co-Investigators in the same Department it is assumed that credit will be divided equally. If this is NOT the case, indicate the appropriate percentage after the signature of each investigator. (All Investigators and Co-Investigators must sign.)

Signature of Investigator(s) My signature below certifies that: **1)** I am not delinquent on any federal debt; **2)** I am not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from current transactions by any federal department or agency; **3)** I have not and will not lobby any federal agency on behalf of this award; **4)** I am aware of and agree to abide with the UH Drug Free Workplace policy; **5)** I agree to abide with the UH Conflict of Interest policy; **6)** I agree to be bound by the terms and conditions of the outside grant or contract which supports this proposed activity and, in consideration of the information and facilities made available to me by the University or the outside sponsor, to assign copyright (where appropriate) and patent rights to the University of Houston in accordance with the terms and conditions stated in the Faculty Handbook.

Signature	Date	Signature	Date
Social Security No.	Administrative User ID	Social Security No.	Administrative User ID

If this project involves more than one Department, College, Institute, Center or Laboratory the Chair/Dean/Director of each unit must sign this form and you must indicate how much credit each unit will receive.

Department/Institute	% Credit	Department/Institute	% Credit

Department Chairperson's/Division Head's, Dean's Statement: I have reviewed this proposal and the accompanying transmittal form. The research or program proposed is in keeping with College/Division/Department/Institute educational objectives and is beneficial to the University. The College(s)/Division(s)/Department(s)/Institute(s) is aware of all requirements of this project and is committed to providing for them, except as noted.

Signature of Department Chairperson(s) (Chairs of all Departments involved must sign.)

Signature	Date	Signature	Date

Signature of Director of Institute/Center

Signature	Date

Signature of College Dean(s)/Division Heads(s) (Deans/Heads of all Colleges/Divisions involved must sign.)

Signature	Date	Signature	Date

OSP USE ONLY

Proposal Number _____ Year 1 $ _____

Date Mailed _____ Total $ _____

Type of Activity IDC Rate _____

Research Public Service

Instruction Student Serv. IDC Amount _____

Fellowship Other

NOTES

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Endorsements

The principal investigator is requested to obtain the signatures of the department chairperson and dean before submitting a proposal to the Office of Sponsored Programs. By signing the proposal, each person indicates that the proposed research or sponsored activity will be beneficial to all concerned (department, university, sponsor) and that the respective campus offices assume responsibility for commitment of resources or persons under their jurisdiction as indicated by the proposal.

The endorsement of the ***principal investigator*** or project director certifies to authorship of the proposal and to proper arrangement of workload of other research or teaching so that the project can be undertaken and the requested time, facilities, equipment, and funding are sufficient to accomplish the proposed task.

In addition, there are certifications that are required for all proposals being submitted to a federal agency. Each principal investigator must certify that: 1) he/she is not delinquent on the repayment of any federal debt; 2) he/she is not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from current transactions by any federal department or agency; 3) no federally appropriated funds have been paid or will be paid, by or on behalf of the principal investigator, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the making of any federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal grant or cooperative agreement; 4) if any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with a federal grant or cooperative agreement, the principal investigator shall complete and submit Standard Form - LLL, Disclosure Form to Report Lobbying, in accordance with its instructions. In addition, the principal investigator's signature indicates that current and pending support and the conflict-of-interest issues, among others, have been appropriately addressed.

The endorsement of the ***department chairperson*** certifies to the review and endorsement of the proposal and concurrence in the representations of the principal investigator; the principal investigator's teaching load will be compatible with the time requirements of the project; adequate space, equipment and facilities are either already available or required modifications or new additions have been approved and funding sources identified; any required payment of tuition and fees by the University has been approved and funding source identified; to the best knowledge, there will be no other resource requirements generated by the award which are not accounted for in the proposal; and all other departmental requirements have been complied with.

The endorsement of the ***dean*** certifies to concurrence in the representations of the principal investigator and the department chairperson and attests that the proposed activity contributes to the attainment of the goals of the college.

The endorsement of the ***sponsored project administrator*** certifies that the proposal has been properly reviewed, is complete and accurate, has the appropriate prior approvals, and meets the requirements of the sponsoring agency as well as the University; and the University is recovering the maximum allowable indirect costs except in those cases where the sponsor has limited the University's indirect cost recovery, or acceptance of a lower indirect cost rate has been justified in writing by the principal investigator and approved by appropriate institutional officials as being in the best interest of the University. In addition, the certifications required from the principal investigator for federal proposals must also be made on behalf of the University. The University must also certify that it will provide a drug free workplace (Drug Free Workplace Act of 1988, P.L. 100-690, Title V, Substitute D). Finally, this endorsement certifies that the proposal is a valid offer by the University to undertake the proposed work under the terms defined by the proposal.

Checklist for Proposal Review

_____ correct forms

_____ internal review checklist

_____ compatibility with internal review checklist

space needs
renovation requirements
cost sharing/matching
human use review & approval
animal use review & approval
rdna review & approval
future commitments

_____ page limitations

_____ type size limitation

_____ all elements of proposal included

_____ correct rates used

_____ budget correct

_____ signatures

_____ subcontractor commitment letter

_____ all certifications included

_____ if RFP, is exception letter needed

_____ if foundation/corporation, on "restricted" list

_____ requirement for state review ascertained

_____ correct number of copies

_____ mailing address, method of transmittal

_____ limitation on number of proposals from institution

Common Proposal Problems

Reviewers' Comments:

TITLE	Too Long Confusing Cute but Distracting Not Program Related
COVER PAGE	Does not Follow Format Precisely Does not Include all Necessary Information
ABSTRACT	Not Comprehensive Omits Significant Elements Poor Grammar or Spelling Too Long (limit 1 page)
TABLE OF CONTENTS	Not Included Inaccurate Pagination
SCHOOL DESCRIPTION and STATEMENT OF NEED	Irrelevant Information Does not Lead Reader to Proposal Objectives Good History; So What? Too Long Deals with Wants, Not Needs No Documentation Unrelated to Objectives/Outcomes Desired Problem Already Solved Not Supported by Current Research
OBJECTIVES or OUTCOMES	Not Clear Too Ambitious Omitted Procedures Rather than Objectives
INNOVATION	Not New or Innovative Attempt to Justify New Equipment/Materials Not Clearly Described Unrelated to Needs or to Objectives

REVIEW OF LITERATURE	Unrelated to Needs, Objectives, Does not Lead Reader Dated Material
TASK/ACTIVITY PLAN	Insufficient Detail Tasks not Related to Objectives Tasks not Justified by Needs Time and Task Charts Not Included Responsibilities not Clear
COLLABORATIVE EFFORTS	Names and Responsibilities of All Involved in Proposal not Identified No Identification of Institutions Involved
EVALUATION	Unrelated to Objectives Unrelated to Innovation Not Usable in Assessing Program Uses Outmoded or Inaccurate Methods
BUDGET	Unrelated to Activities Little or No Contribution Amounts not Supported by Reasonable Data Budget Justification Missing Categories Not Those of Funding Source Budget Cannot be Sustained after Project Ends
PROJECT STAFFING	No Identification of Responsibilities and Roles No Documentation of Competence No Indication of Time Each Contributing to Project

BIOGRAPHICAL SKETCH

Give the following information for the key personnel and consultants and collaborators. Begin with the principal investigator/program director. Photocopy this page for each person.

NAME	POSITION TITLE

EDUCATION *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Key personnel include the principal investigator and any other individuals who participate in the scientific development or execution of the project. Key personnel typically will include all individuals with doctoral or other professional degrees, but in some projects will include individuals at the masters or baccalaureate level provided they contribute in a substantive way to the scientific development or execution of the project. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. DO NOT EXCEED TWO PAGES.

OTHER SUPPORT

(Use continuation pages if necessary)

FOLLOW INSTRUCTIONS CAREFULLY. Incomplete, inaccurate, or ambiguous information about OTHER SUPPORT could lead to significant delays in the review and/or possible funding of the application. If there are changes in the information after submission, notify the scientific review administrator of the initial review group before the review; if changes occur after the review, notify the appropriate Institute.

Other support is defined as all funds or resources, whether Federal, non-Federal, or institutional, available to the principal investigator/program director (and other key personnel named in the application) in direct support of their research endeavors through research or training grants, cooperative agreements, contracts, fellowships, gifts, prizes, and other means. Key personnel are defined as all individuals who participate in the scientific development or execution of the project. Key personnel typically will include all individuals with doctoral or other professional degrees, but in some projects will include individuals at the masters or baccalaureate level provided they contribute in a substantive way to the scientific development or execution of the project.

Reporting requirements are: for each of the key personnel, describe (1) all currently ***active*** support and (2) all applications and proposals ***pending*** review or award, whether related to this application or not. If the support is part of a larger project, identify the principal investigator/program director and provide the data for the relevant subproject(s). If an individual has no active or pending support, check "None." Use continuation pages as needed to provide the required information in the ***format*** as shown below.

Name _____ Active _____ Pending _____ None _____

a. Source and identifying no. _____ P.I. _____

Title _____ _____

b. Your role on project _____ % Effort _____

c. Dates and costs of entire project _____

d. Dates and costs of current year _____

e. Specific aims of project _____

_____

_____

_____

_____

_____

f. Describe scientific and budgetary overlap _____

_____

_____

_____

g. Describe adjustments you will make if the present application is funded (budget, % effort, aims, etc.)

_____

_____

_____

Current and Pending Support

APPENDIX VII

The following information should be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.

Investigator:	Other agencies (including NSF) to which this proposal has been/will be submitted.

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Award Amount (or Annual Rate): $ Period Covered:

Location of Research:

Person-Months or % of Effort Committed to the Project. Cal: Acad: Summ:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Award Amount (or Annual Rate): $ Period Covered:

Location of Research:

Person-Months or % of Effort Committed to the Project. Cal: Acad: Summ:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Award Amount (or Annual Rate): $ Period Covered:

Location of Research:

Person-Months or % of Effort Committed to the Project. Cal: Acad: Summ:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Award Amount (or Annual Rate): $ Period Covered:

Location of Research:

Person-Months or % of Effort Committed to the Project. Cal: Acad: Summ:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future ☐ *Transfer of Support

Project/Proposal Title:

Source of Support:

Award Amount (or Annual Rate): $ Period Covered:

Location of Research:

Person-Months or % of Effort Committed to the Project. Cal: Acad: Summ:

*If this project has previously been funded by another agency, please list and furnish information for immediately preceding funding period.

CRITERIA FOR AWARD ASSIGNMENT TO SPONSORED ADMINISTRATION

Source of Funds Criteria:

- federal or sub-federal
- state agency or municipality
- industrial
- foundation
- other

Activity Criteria:

- research
- instruction
- public service
- equipment
- construction (internally or externally funded)
- student loans or student grants
- non-monetary

Agreement Criteria:

- award instrument needed
- definite time frame stipulated
- budget limitations; controls needed
- reporting requirements
- billing requirements
- cost reimbursement or fixed price award
- disposition of residual funds
- disposition of residual property/equipment
- budget not based on revenue collections
- overhead or indirect costs
- letter of credit
- records retention requirements
- audit requirements

BUDGET DEVELOPMENT

The most difficult section of the proposal for many researchers is the preparation of the budget. Granting agencies, public and private, review hundreds of proposals annually and are proficient at comparing levels of funding requested to the research work proposed. Therefore, the budget section of the proposal should reflect, as accurately as possible, the funding needed to carry out the proposed research. Again, the investigator should not seek to overestimate the funds requested or to underestimate the budgetary needs. Either of these strategies may lead to proposal rejection. However, a carefully prepared budget which details as accurately as possible the funds necessary to carry out the project described in the technical section of the proposal can be of major advantage in strengthening the total research proposal and substantially increase the likelihood of funding.

Furthermore, a carefully thought out budget can often identify weak areas in the proposal narrative and result in improvement of the technical proposal. Research administration staff should be able to provide information on the amount of money awarded by various agencies under past programs, whether or not an agency has increased or decreased levels of funding for the year, and what the success level of the institution has been with that particular agency.

Many agencies have preprinted budget forms which are required to be used in the development of the proposal. In this circumstance, the investigator is mandated to use the agency forms or formats for preparation of the budget. One relatively new innovation is the ability to create budgets and other standardized data on downloaded forms provided by federal agencies. For example, the National Science Foundation through its Electronic Proposal Submission Project[6] will make available the standardized forms necessary for submission of proposals to NSF; similar efforts are underway at the National Institutes of Health. In 1992, NSF and the Office of Naval Research (ONR) began a cooperative program to attempt to standardize the fields of information required on the administrative and financial sections of proposals so that, looking forward to electronic proposal transmission, an institution would not be required to develop different formats for different agencies but could use the standardized information fields, leaving to the agencies how they would structure the information received.

Whether or not standardized prescribed formats are mandated by agencies, certain information on direct costs required to fund a project is universal. Attached is a sample of a budget worksheet which identifies the major direct cost components of a budget (page 72). These elements are described in more detail below.

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[6]This system (labeled EPS) by the National Science Foundation is the initial phase of NSF's transition from paper-based to electronic processing of proposals. Still in its infancy, some institutions have been part of NSF's experimental program on electronic proposal submission, and NSF's goal is to have a completely electronic proposal system in the future. One advantage of this effort by NSF is the ability of institutions to download the NSF cover page and budget pages and use these downloaded versions on a pc while preparing the proposal.

In preparing a budget to accompany a proposal to a potential sponsor, costs are identified as either *direct* or *indirect* costs. The distinction between these is important since it impacts the way costs are identified in the budget. Direct costs are those costs which can be clearly identified and directly accounted for in support of a specific research or sponsored agreement. Indirect costs (also known as overhead or pooled costs) are costs associated with the conduct of sponsored projects that cannot be clearly identified and cannot be clearly accounted for on an individual-project basis. These costs are defined by the federal government as "those costs incurred for common or joint objectives that, therefore, cannot be identified with a particular sponsored project, an instructional activity, or any other institutional activity."[7] It is important for a research administrator who is helping faculty members develop proposal budgets to have at least a rudimentary understanding of indirect costs and be able to explain that such costs are *real* costs of sponsored projects.

Direct Costs

1. Salaries and wages

This section of the proposal budget should reflect the costs chargeable to the project of the individuals who will provide direct support to the program, including secretaries and administrative personnel. Many agencies (such as NIH) require a breakdown between pay for summer months and pay during the regular academic year.

A point of contention often arises over the issue of additional pay or an increase in pay for being the principal investigator/project director on an externally funded project. Although special justifications may result in additional pay under unique circumstances, the reader is referred again to Circular A-21, and the discussion in section J.8. about payments to faculty members. That document states:

> Charges for work performed on sponsored agreements by faculty members during the academic year will be based on the individual faculty member's regular compensation for the continuous period which, under the policy of the institution concerned, constitutes the basis of his salary. Charges for work performed on sponsored agreements during all or any portion of such period are allowable at the base salary rate. In no event will charges to sponsored agreements, irrespective of the basis of computation, exceed the proportion share of the base salary for that period. This principle applies to all members of the faculty at an institution. Since intra- university consulting is assumed to be undertaken as a university obligation requiring no compensation in addition to full-time base salary, the principle also applies to faculty members who function as consultants or otherwise contribute to a sponsored agreement conducted by another faculty member at the same institution.

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[7]This definition appears in OMB Circular A-21, a document for which revisions were published in July 1993. At the time of preparation of this document, it is unclear how certain administrative and clerical costs will be treated by federal agencies. A discussion of the issues appears further in this section and will be discussed in detail in the next volume dealing with post-award issues.

The document continues:

> . . . in unusual cases, where consultation is across departmental lines or involves a separate or remote operation and the work performed by the consultant is in addition to his regular departmental load, any charges for such work representing extra compensation above the base salary are allowable provided that such consulting arrangements are specifically provided for in the agreement or approved in writing by the sponsoring agency.

Section J.8d(2) describes pay outside the academic year as follows:

> Charges for work performed by faculty members on sponsored agreements during the summer months or other period not included in the base salary period will be determined for each faculty member at a rate not in excess of the base salary divided by the period to which the salary base relates. . . ."

In addition it is recommended that time always be expressed as a percentage of effort, and not on an hourly basis. Some of the standardized government budget forms (particularly when the anticipated award will be a contract) ask that time be specified in hours; most institutions insert effort and indicate in the budget justification that the institution calculates effort, not hours, for professional staff and faculty. Since most faculty members do not work a 40-hour week nor keep time cards or other daily time records, an effort representation normally better reflects activity on a project.

In building salary information into a budget, care should be taken on multi-year budgets to increment salaries for additional years. After an award is made, it is seldom (if ever) possible to go back to the agency for additional funds for such increments. The amount of increment should accurately reflect the anticipated increases at the institution and should be clearly justified. Some federal agencies (notably NIH) restrict the amount of increment that can be included in out-year budgets.[8] Nonetheless, to maintain campus consistency with other funding sources an institution must provide increments on research accounts even if other direct cost categories will need to be adjusted.

The issue of consistency with other institutional funds is important in building budgets for externally funded projects. Compensation levels and new job classifications should conform with the institution's normal pay plan for those types of employees; payment from a sponsored project is, in itself, not justification for increasing (or decreasing) the salary levels of support staff.

The use of graduate students is encouraged by many agencies. Payments to graduate students should conform to institutional policy and should not normally reflect 100% of effort (unless payment is requested for periods of time in which the student is not attending classes). Part time employees, when used, should be reflected at hourly rates and identified as either students or non-students, as appropriate.

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[8]NIH also has mandated the maximum *rate* of pay which an individual can request with NIH support, complicating preparation of the budget and requiring that an institution have a policy on how it will handle such salary issues. Specific information on how to present the salary and calculate payments are provided in the NIH proposal guide and should be carefully reviewed in anticipation of preparation of such a budget.

Impact of latest revisions to OMB Circular A-21: On July 26, 1993, OMB issued its latest revisions to OMB Circular A-21. These revisions address a number of issues, including the following:

a) Establishment of two standard cost categories, facilities and administration, while retaining the 26% cap on administrative costs;

b) Examples of certain types of expenses are expanded to clarify how consistency of costs is to be handled. The circular describes consistent treatment in all the indirect cost pools. For this budget discussion, however, the following language is significant:

> "6.b. In developing the departmental administration cost pool, special care should be exercised to ensure that costs incurred for the same purpose in like circumstances are treated consistently as either direct or indirect costs. For example, salaries of technical staff, laboratory supplies (e.g., chemicals), telephone toll charges, animals, animal care costs, computer costs, travel costs and specialized shop costs shall be treated as direct cost wherever identifiable to a particular cost objective. Direct charging of these costs may be accomplished through recharge centers or specialized service facilities, as appropriate under the circumstances. The salaries of administrative and clerical staff should normally be treated as indirect costs. Direct charging of these costs may be appropriate where a major project or activity explicitly budgets for administrative or clerical services and individuals involved can be specifically identified with the project or activity. Items such as office supplies, postage, local telephone costs, and membership shall normally be treated as indirect costs."

The issue, of course, is to what extent can clerical and administrative salaries be charged directly to grants and contracts. The circular states that the salaries of administrative and clerical staff should *normally* be charged as indirect costs, but that charging directly may be appropriate where a major project or activity explicitly budgets for administrative and clerical services and individuals involved can be specifically identified with the project or activity.

From the language it appears that individual grants such as NIH RO1s will no longer include secretaries but that large center and program project grants (to use the NIH language) may budget those individuals on their administrative core portions. How institutions will define "major programs or activities" is yet to be ascertained, and may well vary between institutions.

2. **Fringe benefits**

What is included in the fringe benefit portion of the proposal reflects institutional structure and organization. Most institutions treat fringe benefits as a direct cost; a minority treat them as an indirect cost. Additionally, some institutions use a federally negotiated (or audited) rate for budgeting purposes and charge actual benefits to projects. A few institutions develop and have federal approval for fringe benefit rates used not only for budget estimation purposes but for charging purposes.[9] Regardless of the process

[9]The University of Houston, for example, has negotiated a series of fringe benefit rates for budgeting and charging purposes for a number of years. An advantage of this approach is that it allows a project director as well as institutional officials to estimate expenses with more accuracy than projecting actual charges, which may vary depending upon the

used, it is important to recognize that fringe benefits are an expense to a project and need to be included in the budget for that project. Note that fringe benefits, although they are often presented as a part of personnel costs, are *not* part of salaries and wages.

3. Consultants

The use of paid consultants may be justified when the project calls for expertise of a well-defined nature for a fixed period of time. Consultants are not employees of the institution and should be included in a proposal only when on-campus expertise does not exist or is not readily available. Normally, consultants are paid a consulting fee plus travel and incidental expenses. Many sponsors do not permit payments to consultants, and some restrict or limit such payments.[10] When possible to identify the proposed consultant by name, to indicate the number of days of work, and to provide a curriculum vita for the consultant in the proposal are advisable. Because consultants are paid for consulting services and are not employees, fringe benefits should not be calculated on such payments. There is substantial IRS interest in the area of consultants and it might be worthwhile for someone at the institution to review periodically the institutional criteria for consultants to assist the faculty in determining if, indeed, a proposed relationship with a consultant qualifies as such or is, in fact, institutional employment.

4. Travel

Most sponsors will pay travel costs if requested, although some state agencies limit travel to in-state expenses, and many agencies restrict international travel expenses. In any event, travel expenses should be carefully justified and should include cost estimates for transportation costs, per diem or estimated actual expenditures, and other travel related expenses. It is worthwhile securing quotes directly from US flag carriers for "less than first class" rates. Care should be taken that the travel requests are reasonable and reflect institutional policy.

5. Capital Equipment

The definition of capital equipment, according to OMB Circular A-110, is items of equipment having a unit cost of $300 or more and a usable life of 2 years or more.[11] As a complicating factor, OMB Circular A-21 uses the threshold of $500 or more. Most institutions currently use the A-21 definition, but research administrators should be aware of the inconsistency between these two circulars. Investigators should budget and describe all equipment that will be needed to perform the scope of work defined in the proposal; costs of freight and installation should be included as part of the equipment cost. Many

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salary of the individual and the specific month(s) of the year for which charges are made to sponsored projects.

[10]For example, the National Science Foundation limits the maximum daily rate of consultants to the GS-18 level, raised as of January 1, 1993, from $429 to $443 per day.

[11]A modification to this circular has been proposed by OMB (but not yet adopted) which raises the capitalization threshold to $5000 or the institutional definition, whichever is the lesser. In addition, OMB Circular A-21 had included language raising the threshold beyond the $500 level, but that change was not included in the July 26, 1993, issuance.

sponsors will not allow the purchase of general purpose or office equipment, and this restriction should be recognized in the development of the budget. For institutions that calculate indirect costs on a modified total direct cost (MTDC) basis (see discussion below on *indirect costs*), equipment costs are excluded from the base for calculating indirect costs.

6. Expendable Supplies

Reasonable amounts should be budgeted for consumable expendable supplies such as laboratory items, teaching aids, and office supplies.[12] In addition, faculty who anticipate the use of research animals, especially large amounts of or extremely expensive chemicals or electronic supplies or other specialized expendable items, should specify such items and justify them in an attachment to the budget.

7. Publication and Communication Costs

This category generally consists of page charges for publications, cost of preparing graphics for such publications, reprint costs, telephone charges and long distance costs, fax, and mail charges. The costs should be a reasonable estimate based upon experience. In addition, large mailings of surveys, etc. should be clearly identified and justified. Care should be taken to include only costs which are directly allocable and supportable on the project being requested. It is not acceptable to ask, for example, for support of a telephone in a research laboratory unless that telephone is used exclusively for that project or unless the costs of that phone can be allocated on a reasonable basis to all projects using that telephone.

8. Computer Usage

This is an allowable cost as a direct charge on a project if the computer use charge is a standard charge to all entities using that computer and if an appropriate mechanism exists to recover costs of maintaining and operating that computer.

9. Subrecipient Agreements

This is a difficult area to handle, as the regulations and procedures have been amended in recent years. The definition of a subrecipient is, itself, subject to varied interpretations; generally a subrecipient (as compared to a contractor or vendor) is defined as an entity (often another university) who helps the grantee carry out the activities of the award.[13] This distinction is critical at both the pre-award and post-award levels, but for

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[12]The July 26, 1993, revisions to OMB Circular A-21 specify that office supplies "shall normally be treated as indirect costs." The issue here, of course, is similar to that with respect to clerical and administrative personnel. Institutions should define for themselves whether faculty will be able to include office supplies on the direct cost portion of their proposals to federal agencies. If the decision is a positive one, institutions should be prepared for a lively negotiation with federal award officials.

[13]Particularly helpful in this regard is a Question and Answer document which appeared in the Federal Register November 13, 1987 (pp 43714) which defines a subrecipient for audit purposes and answers the question "What is the difference between a subrecipient and a vendor and what is the determining factor in deciding whether a subrecipient

development of the budget requires that the distinction be made at the proposal stage since it affects the calculation of indirect cost on the research proposal. In a subrecipient relationship, OMB Circular A-21 specifies that an institution which is on an MTDC base may recover indirect costs on the first $25,000 of the subrecipient agreement *regardless of the number of years that agreement exists.*[14] Thus, if a subrecipient is proposed to receive a payment of $40,000, indirect costs of the prime grantee may only be calculated on $25,000, whereas the subrecipient may calculate IDC on his entire project. To illustrate:

Prime grantee's costs subject to IDC		$100,000
Subrecipient's costs		$ 40,000
Direct costs	$30,000	
Indirect costs at recipient's negotiated rate	$10,000	
Total costs	$40,000	

Indirect costs calculated as follows:

Prime grantee's costs at grantee's negotiated rate of 50% MTDC	$ 50,000
Prime grantee's IDC on subrecipient (50% of $25,000)	$ 12,250
Total request to agency	$202,250

When preparing a budget which includes a subrecipient, the research administrator should ensure that, prior to submission of the proposal, there is on file a statement of the subrecipient that it will participate in the program if it is funded. Some description of what the subrecipient is to do should be included as should a detailed budget of the subrecipient's costs. These documents should bear the signature of (at least) the faculty member at the subrecipient institution and the signature of an individual authorized to commit that institution. It is also advisable to have the principal investigator disclose whether (and to what extent) he has any direct or indirect financial interest in the subrecipient organization. With proposed changes relating to such interests, many institutions may have to make significant adjustments in their proposal processing systems to accommodate the necessity to disclose and resolve such potential conflicts of interest in advance of submitting a proposal to a federal agency.

10. **Other Direct Costs**

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relationship exists?"

[14]Although governmental agencies have operated on this understanding that the number of years an agreement exists is immaterial in calculating the amount of IDC to be recovered on a subrecipient agreement, this statement has been made explicit in the July 1993 revisions to A-21.

The budget should identify other items not covered above, such as reference books and materials, equipment maintenance costs, library searching services and payments to human subjects.

11. **Matching Funds/Cost-sharing**

Although there is not now a federal regulation requiring cost-sharing on research grants, many agencies still require matching or cost-sharing funds to be provided on proposals. Often specific matching (such as 1:1, or 1:2) is required (example: equipment grant programs), and other times agencies simply indicate that cost sharing is recommended and will be a factor in the review and scoring of a proposal. Matching funds are generally defined as cash (e.g. a percentage of the cost of a piece of equipment) whereas cost-sharing is usually an in-kind match, documented in the form of contributed time and effort by the principal investigator and/or associated personnel. Matching funds can also be secured from third parties who are interested in participating in the sponsored program.[15] It is important to recognize that matching (or cost-sharing) which appears on the proposal budget becomes a commitment of the institution in carrying out the project. Every effort should be made to limit, where appropriate, such contributions, particularly when they are not required by the potential sponsor.

12. **Budget Justification**

This may be one of the most important sections of the non-technical proposal. In this section the proposer describes budget categories and indicates why there is a need for the particular items listed in the budget. Here, for example, the principal investigator should justify any items of permanent equipment requested in the proposal, describe what trips will be taken and for what purpose, while indicating specific costs for travel and subsistence, indicate the level of salary and inflation increments for specific categories of expense, etc. The information in the budget justification is often the information review panels and administrative officials at funding agencies use to determine level of funding for a meritorious proposal.

Indirect Costs

In an earlier section, indirect costs were defined as those costs which support the research enterprise but which cannot be assigned with any degree of precision to specific grants or contracts. The preparation and calculation of an institution's indirect cost rate proposal and the negotiation with the cognizant federal auditor which established the institution's rate is a complex and far ranging issue. Although the research administrator is normally not heavily involved in the preparation of an indirect cost proposal, a general understanding of indirect costs is essential along with some basic information on how the employing institution treats certain elements of costs. The best advice is to talk to the financial officer responsible for the computation, submission, and negotiation of the indirect cost rate proposal to understand the specific situation of any given institution.

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[15]OMB Circular A-110 defines what can be utilized as cost-sharing and matching and the acceptable methods for documenting such costs.

Nonetheless, there are some principles related to indirect costs which are valuable for all research administrators to understand:

- indirect costs are real costs and reimburse an institution for costs already incurred in the administration of sponsored projects;

- indirect cost rates are established through an audit or negotiation process with the institution's cognizant federal auditor;

- depending upon how an institution is organized, certain costs may be direct costs, some may be indirect costs, but no cost can be both direct and indirect;

- differences between institutional structure and management, and the age and amount of facilities dedicated to research are primary reasons for the differences in indirect cost rates among institutions—a low rate does not mean an institution is more efficiently managed; a high rate does not reflect how poorly an institution is managed nor that greater services are provided by the institution to the researcher.

- while indirect cost rates vary among institutions, that variation is related to the items identified above and is not a result of whether the institution is public or private.

In utilizing indirect cost rates, there are two standard bases for application of such rates:

- a modified total direct cost (MTDC) base, where the institution's negotiated rate is applied to all costs *except* equipment, subcontracts and subgrants over $25,000, and major alterations and renovations;

- a salaries and wages (S&W) base, where the institution's negotiated rate is applied to all salary and wages costs.

Simply quoting a percentage such as "our indirect cost rate is 60%" is meaningless unless the base (MTDC or S&W) is also quoted. Also, it is important to know whether the rate is applied to projects performed on-campus or off-campus, as many institutions have different indirect cost rates for each of these situations. Indirect cost rates can change from year to year as the government and the institution renegotiate such agreements. Adjustments in out-year budgets should reflect approved changes in the negotiated indirect cost rate.

Proposal Budget Worksheet

Principal Investigator: _____ Dept. _____

Sponsor: _____

Proposed Budget Period: _____

A. Personnel:

Name and Title	% of Time	Rate	Amount Requested

B. Fringe Benefits:

C. Consultants:

Name	Rate/Day	Number of Days	Total Requested

D. Permanent Equipment (itemize):

E. Expendable Equipment and supplies (itemize):

F. Travel (include purpose of travel, estimated number of days, rate of free time, transportation cost):

G. Publications Costs (include page costs and cost of reprints):

_____ _____
_____ _____
_____ _____

H. Computer Costs (include type of computer and rate):

_____ _____

I. Other Costs (example: telephone, postage, copying, consultant expenses):

_____ _____
_____ _____
_____ _____
_____ _____

J. Total Costs (Item A-I) _____

K. Indirect Costs _____% of J less D _____

L. Subrecipient agreement
(attach budget from subrecipient):

_____ _____

M. Indirect Costs _____% of amount up to $25,000
on each subrecipient[16] _____

N. Total Costs _____

[16]OMB Circular A-21 allows the subrecipient to charge full indirect costs on the subrecipient agreement. The prime recipient, however, may only charge indirect costs on the first $25,000 of each subrecipient agreement, regardless of the number of years the agreement is in force.

REVIEW AND SUBMISSION OF PROPOSALS

Although a proposal to carry out a specific project is normally prepared by a faculty member or group of faculty members, the proposal itself is submitted on behalf of the institution and requires an institutional signature before the proposal leaves the institution. A research administrator is a crucial element in the review and submission of that proposal. Not only is that the person most knowledgeable about the rules and regulations of the agency in preparing and submitting the proposal, the research administrator is normally the individual who is charged by the institution in reviewing all of the elements of the proposal for compliance with sponsor and institutional requirements.

The authorizing signature on the proposal is, of course, of great importance since that signature represents the institutional agreement to proceed with the project, if funded. The signature also serves as certification that the proposal elements required by the agency are complete and that the proposal fairly presents, to the best of the signer's ability to know, the appropriate costs of the institution to carry out the research endeavor. The research administrator must know which agencies will not accept "per" or "on behalf of" signatures and ensure that the appropriate signature appears in all necessary places on each proposal.

Leadtimes

The leadtime required for review of a proposal at the institution varies with the proposal's size, complexity, and the care taken in its preparation and prior review. It also depends upon the number of proposals already submitted at any given time to the research office for review and the staff available to do that review. Additionally, depending upon the institution, leadtimes must consider the number of signatures required on the document before it reaches the sponsored programs office and the reviews necessary at other levels after the sponsored project officer's review.

Recent changes by federal agencies now suggest that the institutional review be of a significantly detailed nature --not only reviewing the proposal for compliance with institutional and agency guidelines and checking the budget for completeness and accuracy -- but also checking the proposal for type size and page limitations and reviewing in detail the current and pending support detailed in the proposal for key personnel. Certifications are also more extensive and must be completed by the appropriate institutional official before submission of the proposal to the potential sponsor. Additionally, the review and preparation of the administrative components of a proposal that are expected to result in the award of contract, rather than grant, funds is sufficiently more complex so that additional lead time should be budgeted. Normally such proposals are a response to a "Request for Proposal" (called an RFP) or a "Request for Quotation" (called an RFQ). When an RFP or RFQ details clauses unacceptable to an institution, the institutional official who reviews a submission on an RFP basis must take exception to these clauses. Failure to do so at the time of proposal submission may ultimately place the institution in a position of having to accept less than desirable clauses and conditions in order to receive an award. Leadtimes often vary from 3 to 10 days depending upon the institution and the type of proposal.

Copying and Mailing

Some institutions are equipped in their sponsored programs offices to copy, assemble, and mail proposals to potential funding agencies. Other institutions secure the appropriate signatures and return the completed proposal to the principal investigator to handle such items. Whether a research office provides copying and mailing services or not, to respond to deadlines established by sponsors and to recognize whether those deadlines are mailing or receipt deadlines is critical. With the advent of commercial mail services such as Federal Express and Airborne, many institutions have turned to those services to deliver proposals to meet agency deadlines. As a cautionary note, it is important to realize that the delivery address may change, depending upon the method of transmittal (US Postal Service, Airborne/Federal Express, UPS) and a careful review of the guidelines to ascertain the exact correct mailing address is worth the effort.

The instructions issued by the granting agency for collation of proposals must be followed *exactly;* failure to do so (or to meet mail or receipt deadlines) may be grounds for rejecting the proposal out-of-hand. If the research office is not tasked with this responsibility, personnel in that office should help the investigator meet these requirements. Some federal agencies (notably NIH and NSF) provide checklists to help ensure that all elements required in the proposal are in place and that appropriate signatures and compliances have been secured.

Contacts with Potential Sponsor After Submission

An institution should follow-up on proposals within a reasonable time to assure that the proposals have reached the agency and are being processed. Agencies which provide (or require) the submission of a notification postcard to be completed and returned by the agency are particularly appreciated. Status checks, after reasonable times have elapsed, are often advisable both as a method to verify that the proposal has been received and is being considered, and as a method to maintain a personal relationship with an agency. Whether the research officer or faculty member makes that contact, each should be cognizant of the federal regulations concerning lobbying and be sure that follow-up contacts cannot be construed as lobbying.

Representations and Certifications

In submitting federal agency proposals which are developed in response to a contract solicitation (and sometimes for grants and cooperative agreements), institutions often must complete a series of representations and certifications (called "reps and certs") which specify, in general, how the institution carries out its business, that the individuals performing the research are not debarred or suspended, are not delinquent on the payment of any federal debt, and that appropriate review by human subjects (IRB) and animal care (IACUC) committees have been or will be performed. This section often identifies the period of time for which the proposal will be valid, who the key personnel are, who is authorized to negotiate for the institution, that no individual was utilized to prepare the proposal who will be paid on a contingency basis if an award is made, etc.

Such documents are often, if not always, impossible for a faculty member to complete and should be the responsibility of the sponsored project administrator. Depending upon the requirements specified in an RFP for a contract, these documents may be made a part of what is known as the "technical proposal" or the "management proposal." In the latter appears the budget, budget justifications, copies of indirect cost agreements, etc. In the former the research activity is described, along with the vitae of key persons, and a description of the time projected to be required. In reviewing these documents an institution should take formal written exception to contract clauses which are unacceptable to the proposer. The exception letter should specify the reason the clause in unacceptable and suggest alternate clauses or language which would be acceptable.

CERTIFICATIONS AND ASSURANCES

Public policy establishes a number of requirements with which institutions must comply in submitting applications for and accepting federal funds. State and private funding sources, and many foundations, have adopted many of the public policy requirements in their sponsor requirements. These requirements have been instituted to ensure safety and protection for individuals participating in research projects and for the community, when hazardous or dangerous materials are used in research projects, and to uphold ethical standards of honesty and integrity.

Certifications provide assurance to the sponsor that the institution is aware of these regulations and will monitor to assure compliance with them. Although there are a number of ways of categorizing these compliance regulations, they generally are identified in the following broad categories:

- individual rights (antidiscrimination, privacy)
- protection (environmental protection, protection of living organisms)
- employee directives (drug-free workplace, drug-free work force, drug free schools and campuses, lobbying, occupational health and safety, social employment standards such as Walsh-Healey and Davis-Bacon acts)
- fraud, waste and abuse (misconduct, conflict of interest, procurement integrity, debarment and suspension, anti-kickback)

The last decade has seen a significant growth in the complexity and variety of these regulations, and many institutions have created special offices of compliance to deal with these requirements. Whereas at one time requirements placed on universities by sponsoring agencies focused on specific financial and managerial issues, requirements (which generally are expressed as certifications) are now the result of Congressional legislation passed to achieve a social or economic goal or to guide the actual way research is performed. This approach is often adopted by the federal government as effective and enforceable tools to achieve honesty and integrity in the conduct of research.

Although not all certification and assurances that institutions must adhere to will be discussed in this section, some that pertain specifically to the submission of research proposals will be discussed. For a complete summary of the certification and regulatory requirements imposed on sponsored programs, the reader is directed to the document entitled *Regulation and Compliance: A Compendium of Regulations and Certifications Applicable to Sponsored Programs*, published by NCURA in 1991 and updated annually. This document describes each of the specific compliance requirements in the following format:

originating statute
background
applicability
requirements
sanctions imposed for non-compliance
minimum compliance actions required

Individual Rights

In submitting proposals to federal agencies, the proposer certifies that the institution adheres to the antidiscrimination and civil rights statutes dating back to the 1960's. The institution assures the funding agency that it does not discriminate on the basis of race, sex, age, veteran status, or handicap, and that it offers equal employment opportunities to all. In dealing with vendors and contractors, the institution also certifies that it utilizes women and small and small disadvantaged businesses and will submit appropriate reports, if required, to specify that utilization.

Normally these individual specific certifications are maintained by a Human Resources Department or an Equal Opportunity officer. Periodic checking (perhaps annually) with such individuals or departments is recommended before casually and routinely making such certifications.

Protection[17]

Institutions must be able to certify that they comply with the requirements of the Clean Air and Clean Water Act and with the regulations imposed for the acquisition, management, and disposition of hazardous materials. As in the area of individual rights, the actual responsibility for these types of compliances is generally assigned to a Physical Plant or Facilities Manager. The same advice holds for periodic checking to ascertain compliance with these requirements.

In the area of protection of living organisms, the sponsored projects office is normally much more involved. Federal agencies have proposal-specific requirements on the use of animals in research, humans used as research subjects, and in the use of recombinant DNA.[18] Generally these requirements specify that the institution must have an appropriately established and recognized faculty-based committee review and approve the research being proposed. In some cases, this review must be completed *within* 60 days following proposal submission in the case of the original proposal and *before* submission on renewal proposals. If these timeframes are not adhered to, the agency may choose not to review the proposal or may withhold funding until such protocol approvals have been received.

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[17]A general discussion of animal welfare requirements, human subjects research, recombinant DNA research, affirmative action, debarment and suspension, and the drug-related requirements of various regulations appears in College and University Business Administration, Fifth Edition, 1992.

[18]For animals, see the Animal Welfare Act, P.L. 89-544 as amended by P.L. 91-579, 94-279,and 99-198 and the regulations promulgated in CFR, Title 9, Subchapter A, Parts 1-4. Additionally, see NIH publication 85-23 "Guide for the Care and Use of Laboratory Animals." For humans involved in research, see P.L. 93-348 as implemented in 45 CFR 46 and as modified on June 18, 1991 (see Federal Register 56 FR 28004). For recombinant DNA research, consult NIH regulations published May 7, 1986 (51 FR 16958).

Employee Directives

Certifications specifying actions required or prohibited with respect to employees appear in two general categories: those that *prohibit* employees from certain actions and those which *require* certain actions. In the former appear the prohibitions against lobbying and the restrictions on the use, sale, transfer, or possession of drugs and other illicit materials. Institutions are required to notify their employees of these regulations and to require that employees, if they are supported by federal funds, disclose such activities to the appropriate institutional officials. These regulations incorporate requirements in student financial aid offices as well as in sponsored programs offices, and institutional officials should coordinate the review of institutional programs to ensure that the requirements related both to contracts and grants and financial aid are met.

The institutionally-required directives relate generally to the protection of individuals with respect to overtime pay, safe work conditions, and minimum wages. Generally the Human Resources Department is responsible for compliance with these regulations, but sponsored programs officers should be familiar with the requirements since they are certifiable items which normally fall in the research administrator's purview.

Fraud, Waste, and Abuse

Although certifications are required in a number of areas (procurement integrity, anti-kickback, contingent fee payments), by far the most difficult compliance falls in the areas of misconduct in science and conflict-of-interest. When the misconduct in science regulations were originally issued by the National Institutes of Health and the National Science Foundation in 1987, certain celebrated misconduct cases had appeared in the press. Institutions were required -- as a condition of receiving federal funds from these agencies -- to have written policies complying with the requirements of the agencies and specifying when and what would be reported to them. Although as originally issued, the requirements pertained to the "proposing, conducting, or reporting on the conduct of research," the National Science Foundation in 1991 broadened its definition to include "all activities supported by the National Science Foundation."

These are the only two agencies which, at the present time, have formally adopted misconduct in science regulations and, unlike the regulations involving humans or animals where standardized definitions and procedures have been adopted by all federal agencies, the procedural requirements of NIH and NSF are different. The certification requirement on proposals is that the institution has a formal policy and will adhere to that policy with respect to charges of misconduct in science.

It should be noted that "misconduct in science" does not mean only in scientific and engineering disciplines but refers to a much wider cadre of academic issues, including plagiarism and misrepresenting the work of another as one's own. Although the disposition of misconduct charges and compliance with these regulations is generally the responsibility of the academic vice president or president, the research administrator needs

to be knowledgeable about the regulation and able to provide data when required to the federal agencies.

For years institutions were required to certify that they had policies prohibiting or limiting potential conflicts of interest of individuals involved in research, but the specific content of those policies was not prescribed by the federal government. In 1989 the National Institutes of Health issued draft guidelines for such requirements but withdrew the guidelines for revision after significant public outcry. In summer 1992 the National Science Foundation issued a specific set of guidelines in the Federal Register[19] for public comment. If adopted as written, the NSF guidelines will require institutions of higher education to identify and resolve potential conflicts of interest on the part of all key personnel and their family members and business associates involved in a proposal.

Whether these policies are adopted as proposed, it is clear that institutions will need to have formal policies on conflict of interest (and possibly conflict of commitment) and that these policies will probably require institutional review and certification prior to proposal submission.

The need of research administrators to know the requirements related to each of these certifications, and the other certifications which appear in the aforementioned NCURA publication and are referenced in grants manuals and policies from federal agencies, cannot be overemphasized. Failure to comply with these regulations and certifications can lead to nonacceptance of proposals by federal agencies, to the inability of an agency to make an award, and to the loss of federal funds once an award has been made. The fact that many voluntary health agencies (such as American Heart Association, American Cancer Society, etc.) have adopted these regulations for their awards is testimony to the breadth and depth of the societal issues they address.

[19]Federal Register, Vol. 57, p. 31541, July 16, 1992.

NEGOTIATION AND AWARD

An external granting agency may take several months to respond to a proposal. Generally, responses are more quickly received from private and not-for-profit entities than from state or federal governmental agencies, but, whatever the agency, seldom is a proposal accepted and funded exactly as proposed by the investigator.

Negotiations take place at various stages of the proposal/award process. Particularly in the case of industrial and corporate sponsors, there is often informal contact even in advance of submission of a proposal between the principal investigator and the sponsor's technical representative concerning the scope of work, time frames, expected outcomes, and even the budgetary level to be supported. Other times, negotiation and discussion may ensue after submission of the proposal but before an award is made. In the case of proposals to federal agencies, however, lobbying and procurement integrity regulations limit or prohibit contact between the institution or its personnel and a sponsoring agency. The research administrator should be cognizant of these restrictions and communicate necessary and important information to the principal investigator about the type of communications which are acceptable.

Because proposals are endorsed by institutional officials, formal negotiation of contract and grant terms should occur between the authorized institutional official and the legally designated contracts or grants officer of the sponsoring agency. A wise sponsored program administrator will include the principal investigator in the negotiation process, but direct contact with the sponsor on administrative and financial matters should be restricted to the authorized institutional official. Faculty members need to be aware that they cannot legally bind the institution, and they should be cautioned that, although they may reach tentative agreements with program officers of a sponsoring agency, those agreements are not legal until ratified by the institutional official.

The type and level of negotiation may vary depending upon the sponsoring agency and the type of award instrument contemplated. In the case of grant awards (particularly from federal agencies), there is very limited negotiation needed, often limited to establishing the beginning date of the award and negotiation of the budget (usually downward). In the contract arena, however, significant negotiation must take place, with emphasis on items such as copyrights, patents, publication restrictions, title to equipment, insurance and liability issues, etc. In the final analysis, any review by an institutional official of a proposed funding agreement should provide assurance to the institution that the award complies with institutional policies, the scope of work can reasonably be expected to be accomplished with the budget and timelines specified in the award, the institution can comply with requirements of the sponsor with regard to submission of reports (both technical and fiscal), and that the award does not make extraordinary or unreasonable commitments of institutional resources.

Depending upon the policies of the institution, a research administrator may need to seek approval from legal counsel or financial officers prior to accepting awards. At some institutions this requirement for additional review is limited to certain types of instruments (contracts), dollar levels (generally over $100,000), or institutional commitments (i.e., cost-sharing, maintaining the program after external funding has

ended). When these reviews are necessary, to establish *in advance* how and when they will be accomplished is advisable. Often at the end of the federal fiscal year (September 30) an institution may have to negotiate several awards within just a few days, and a regular process for that activity can help all involved.

Special Issues

Contract negotiations can often be tricky and time consuming. The research administrator, as the primary reviewer of contract awards, needs to review *in detail* every contract clause referenced in the contract. In the case of federal awards, agencies will often cite Federal Acquisition Regulation (FAR) clauses by reference (i.e., giving the title and number of the clause without including the text). It is incumbent upon the research administrator to consult the FAR[20] to ensure that the agency has included the appropriate clauses. For example, some institutions may claim exceptions to the standard insurance clauses if they are state universities; failure to claim the exemption might require an institution to carry insurance from which they are normally exempt. Listed below are the administrative items which are generally of greatest concern to institutional officials in reviewing contract documents:

patent/copyright clauses: Does the institution have title to the intellectual property developed by its personnel? Are copyrights required to be transferred to the sponsor?

key personnel: Are the appropriate persons identified as key personnel on a project? (Remember, key personnel generally cannot be changed without advanced written approval of the agency; thus, it is wise to limit the key personnel only to the principal investigator/project director.)

equipment (title, definition): Does the institution have title to the equipment purchased under the project? Is title important? Is the definition of equipment consistent with institutional policy?

travel: Are there restrictions on travel, either domestic or international? Does travel have to be approved in advance of each trip by the sponsor? Are the rates authorized for reimbursement in line with institutional policy?

technical and fiscal reports: Can the institution file fiscal reports by the dates specified in the award? Can the principal investigator do the same for technical reports?

publications: Are there publication restrictions in the award? Does the agency have to approve publications in advance?

data rights: Who has title to the data produced under a project? Can the institution or the principal investigator use that data for further research?

Many of these requirements must be considered not only in contracts but also in grants. In the latter, perhaps the most useful reference document (at the federal level) is

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[20]The Federal Acquisition Regulations are available from the Government Printing Office and are updated periodically. In addition to the FAR itself, institutions need to secure the agency specific regulations that, for each agency, modify the standard FAR clauses. There are also available from the GPO. Additionally, many institutions subscribe either to the Commerce Clearing House publications of the FAR and FAR supplements or to computerized versions.

OMB Circular A-110. This circular prescribes the maximum an agency can impose on its grantees and the minimum expected of the grantee to comply with these agency requirements. One example is illustrative: A-110 limits the submission of technical and fiscal reports to quarterly, although it gives agencies the ability to extend that requirement to annually. An institution, therefore, should not accept a grant award from a federal agency which requires monthly reporting.

Four other items deserve special comment in the negotiation/award cycle: pre-award audits, site visits, best and final offers, and negotiating with for profit organizations.

Pre-award audits: Federal regulations require that an audit be performed on all contract awards over $100,000. This audit can either be a "desk audit" (i.e., performed on the basis of information submitted to a contracting officer) or an "on-site" audit, where the auditor(s) review institutional systems and specific items. In either instance, a pre-award audit should be looked upon as a positive: it generally means that an award will be forthcoming. The research administrator and principal investigator should work together to provide the information requested or required by the auditor, especially information needed to support the costs in the original proposal.

Site visits: As with pre-award audits, site visits are an indication that a project has had a favorable initial review and is a finalist for an award. The most common site visits are those conducted by the National Institutes of Health, and there is an established protocol for conducting such visits. Institutions unfamiliar with the NIH site visit processes might want to secure from NIH the videotapes which they have prepared on site visits. Those familiar with site visits can often provide additional information to persons without that familiarity. It is important, for example, to stress to faculty preparing for site visits not, in their presentations, to reiterate what is already in the proposal but to provide additional information and research data compiled after the proposal submission to buttress the case for funding. However, no workscope additions or changes should be introduced at the site visit. Site visits from other organizations have less structure than those from NIH, and the research administrator should feel comfortable in asking agency personnel what to assemble, who to include, the length of the site visit, etc.

Best and final offers: In the contract arena, institutions may be asked to provide a "best and final offer" to an RFP. Although this is often interpreted to mean "a lower priced offer" it should be emphasized that such a reduction is not necessarily the case. A best and final offer is a final description of the work to be performed and the budget that accompanies that work. As in the situation of preaward audits and site visits, being requested to provide a "best and final" is evidence of making a final potential selection list.

Negotiating with for-profit organizations: These negotiations may often be the most exhaustive and time-consuming negotiations in which a research administrator can be involved. Funding from a for-profit organization does not necessarily conform (and generally does not conform) to the standard clauses and understandings that an institution of higher education has developed with federal and state granting agencies.

For example, a for-profit organization may insist on title to equipment, ownership of patents, and review and approval of publications. It is in the best interests of a university to resist these and similar incursions on academic freedoms and responsibilities. One example will suffice: if a for-profit organization has approval rights to publications and refuses to approve a doctoral dissertation, what happens to the student who is unable to publish his thesis research? In these types of negotiations, understanding of the difficulties involved need to be made clear to the faculty member and advice and support from a legal counsel is often highly advised.

How an institution responds to these and similar questions depends in large measure upon the general policies adopted by the institution and who has the authority to waive these policies. The research administrator's role is often one of identifying the issues and coordinating the development of institutional responses to specific conditions imposed by the sponsor. The situation is slightly different when a for-profit organization is making an award to an institution and the source of such an award is a federal award to the for-profit organization. In such instances, a university must ensure that certain terms and conditions imposed by the federal agency upon the commercial contractor are not, by reference, passed down to the institution. These negotiations are generally easier to manage but are, nonetheless, more difficult and time-consuming that a direct award from a federal agency.

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